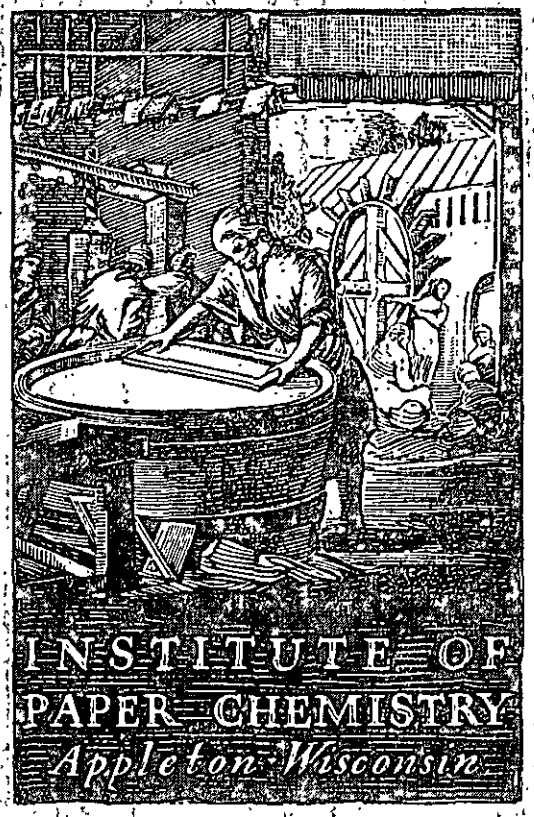
MAR 27 1959




Institute of Paper Science and Technology
Central Files

# CONTINUOUS BASELINE STUDY

**Project 1108-13**

**Progress Report 141**

**to**

## FOURDRINIER KRAFT BOARD INSTITUTE, INC.

**March 1, 1959**

THE INSTITUTE OF PAPER CHEMISTRY

Appleton, Wisconsin

# CONTINUOUS BASELINE STUDY

Project 1108-13

Progress Report 141

to

FOURDRINIER KRAFT BOARD INSTITUTE, INC.

March 1, 1959

TABLE OF CONTENTS

THE INSTITUTE OF PAPER CHEMISTRY

Appleton, Wisconsin

## PART I: PRESENTATION AND DISCUSSION OF RESULTS OBTAINED AT THE INSTITUTE OF PAPER CHEMISTRY

In conjunction with the F.K.I. Continuous Baseline Study, The Institute of Paper Chemistry has been directed to identify the participating mills by means of a scrambled system of code letters. Under this system, which was initiated in Progress Report 105, each mill is identified by a code letter different from that used for the previous month.

During the month of February, seventy-eight different sample lots of 42-lb. Fourdrinier kraft linerboard from sixteen different F.K.I. mills were processed at The Institute of Paper Chemistry. A tabulation of the number of samples classified according to mill may be seen in Table I.

These sample lots were tested for basis weight, caliper, bursting strength, and Elmendorf tear. The average strength results for each mill may be seen in Table II and are graphically presented in Figures 1 to 5. In addition to a comparison of the mill averages for the various tests, Table II also shows the current F.K.I. averages, the cumulative F.K.I. averages, and the F.K.I. indexes. The cumulative F.K.I. average is based on the results for the previous twelve months excluding the current period. Hence, in the case of the current report, it covers the period from February 1, 1958, to January 31, 1959. The F.K.I. indexes are obtained as follows:

$$\frac{\text{current F.K.I. average}}{\text{cumulative F.K.I. average}} \times 100 = \text{F.K.I. index (\%)}$$

TABLE I

NUMBER OF SAMPLE LOTS SUBMITTED BY EACH MILL

| Mill Code | Number |
|---|---|
| A | 7 |
| B | 5 |
| C | 0 |
| D | 4 |
| E | 7 |
| F | 8 |
| G | 3 |
| H | 9 |
| I | 4 |
| J | 2 |
| K | 0 |
| L | 2 |
| M | 7 |
| N | 3 |
| O | 0 |
| P | 4 |
| Q | 7 |
| S | 2 |
| T | 4 |
| Total | 78 |

TABLE II

SUMMARY OF COMPOSITE MILL AVERAGES--FEBRUARY 1 THROUGH FEBRUARY 28, 1959

| Mill | Basis Weight, lb. | Caliper, points | Bursting Strength, p.s.i. gage | Elmendorf Tear, g./sheet | |
|---|---|---|---|---|---|
| | | | | In Machine | Cross Machine |
| A | 43.5 | 12.5 | 114 | 328 | 374 |
| B | 44.2 | 13.4 | 108 | 309 | 359 |
| C | No samples submitted. | | | | |
| D | 43.6 | 14.3 | 106 | 347 | 379 |
| E | 43.6 | 11.9 | 110 | 348 | 399 |
| F | 43.5 | 12.3 | 111 | 364 | 399 |
| G | 42.8 | 12.9 | 110 | 348 | 404 |
| H | 43.3 | 12.7 | 110 | 327 | 365 |
| I | 43.1 | 13.3 | 110 | 299 | 350 |
| J | 43.2 | 12.5 | 109 | 319 | 373 |
| K | No samples submitted. | | | | |
| L | 42.2 | 12.9 | 107 | 310 | 364 |
| M | 43.9 | 12.4 | 115 | 346 | 393 |
| N | 42.9 | 13.2 | 110 | 310 | 361 |
| O | No samples submitted. | | | | |
| P | 44.2 | 12.4 | 116 | 344 | 369 |
| Q | 42.7 | 12.1 | 112 | 315 | 357 |
| S | 42.5 | 13.1 | 109 | 308 | 349 |
| T | 42.9 | 12.6 | 106 | 362 | 372 |
| Current FKI Average: | 43.3 | 12.8 | 110 | 330 | 373 |
| Cumulative FKI Average: | 43.3 | 12.7 | 112 | 331 | 376 |
| FKI Index, % | 100.0 | 100.8 | 98.2 | 99.7 | 99.2 |

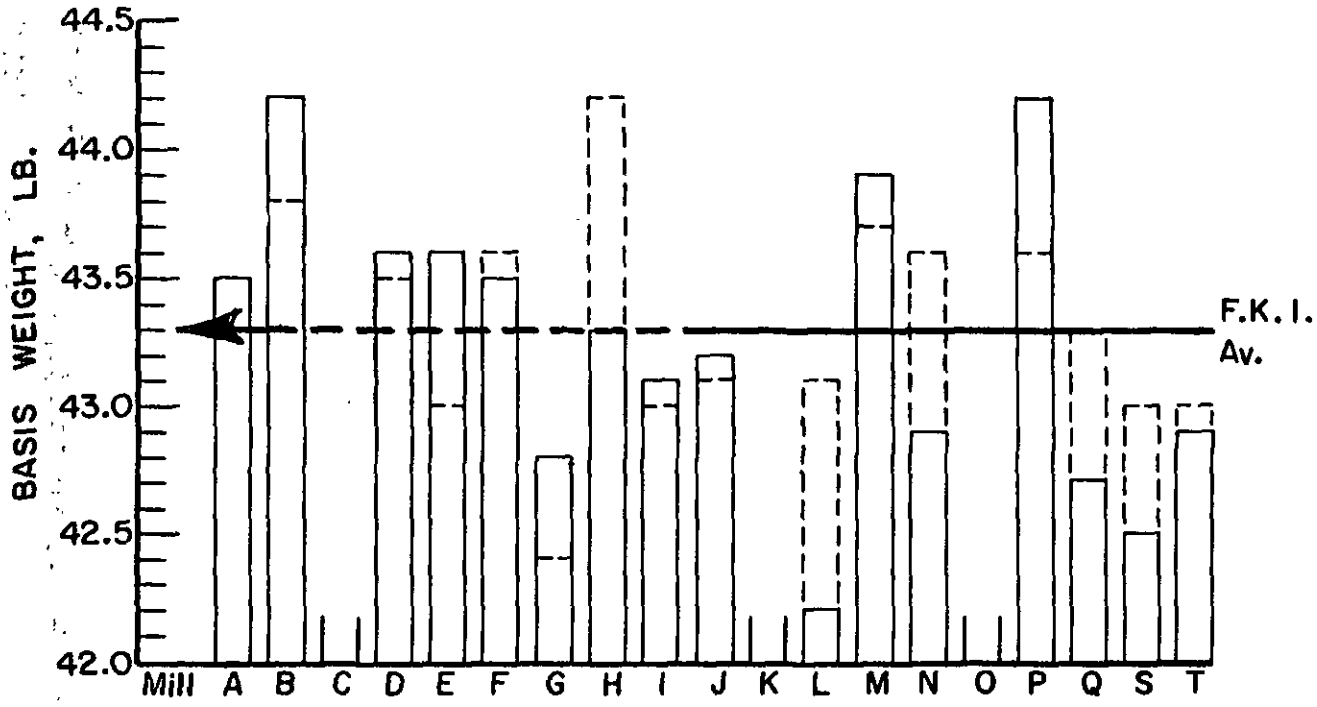



Figure 1

Comparison of Basis Weight Results for February, 1959

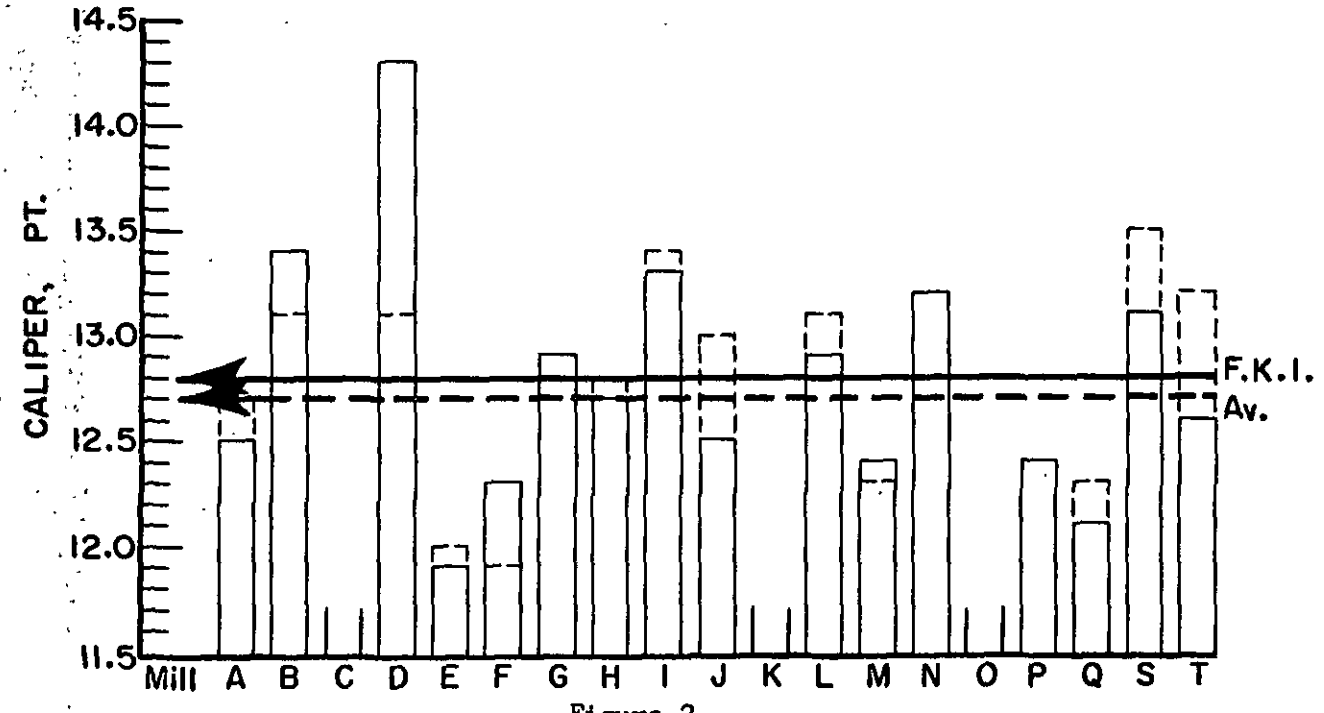



*Figure 2*

Comparison of Caliper Results for February, 1959

——— Current mill average

– – – – – Cumulative mill average

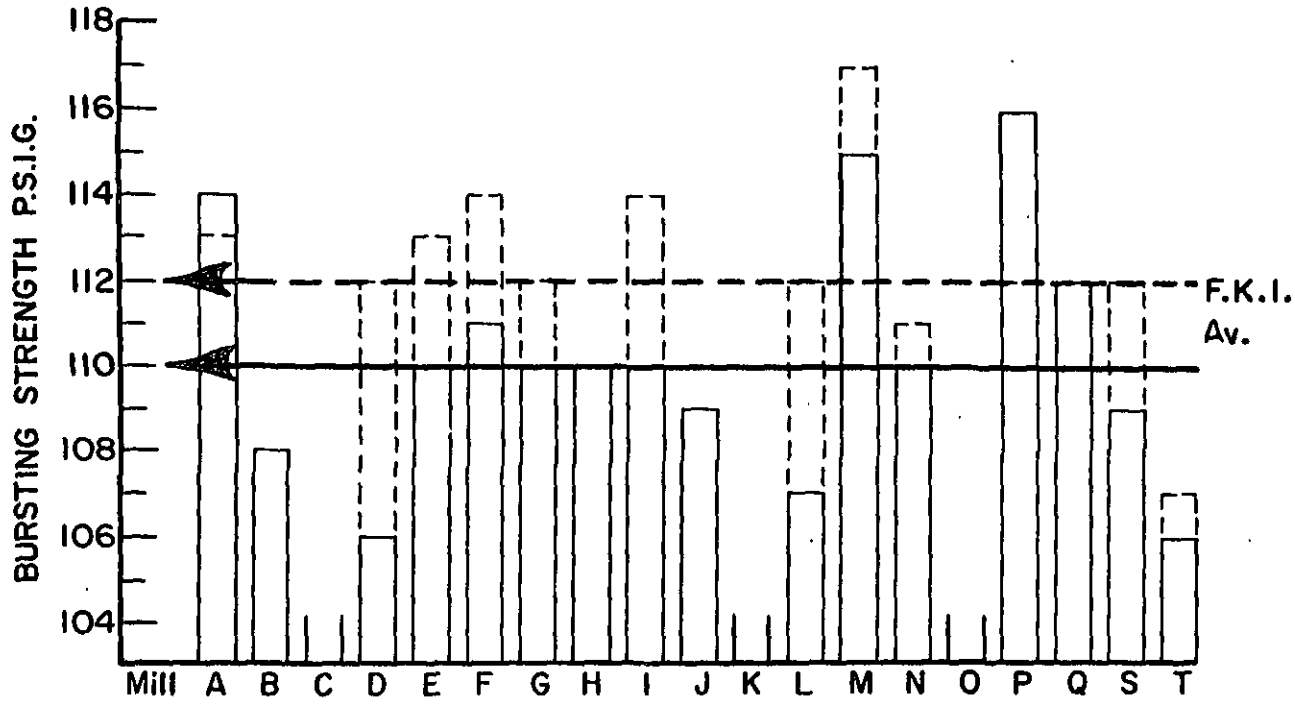



Figure 3

Comparison of Bursting Strength Results for February, 1959

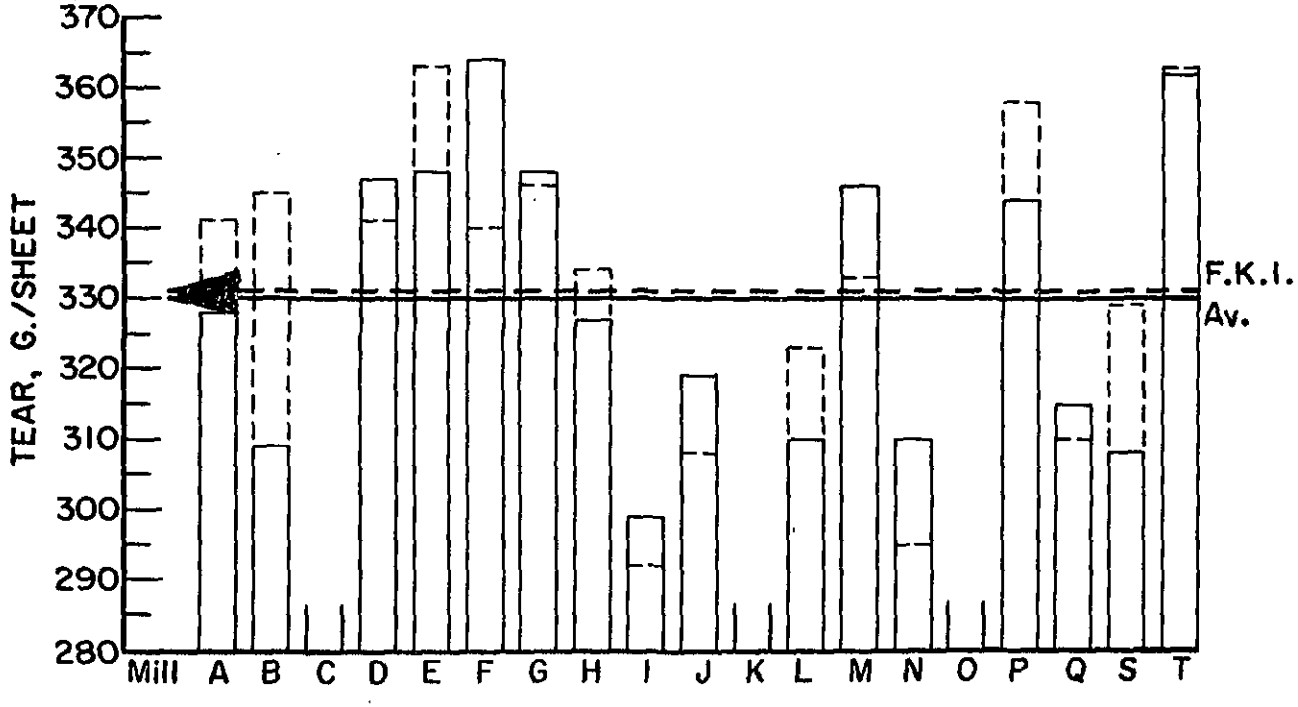



Figure 4

Comparison of Machine Direction Tear Results for February, 1959

——— Current mill average

- - - - - Cumulative mill average

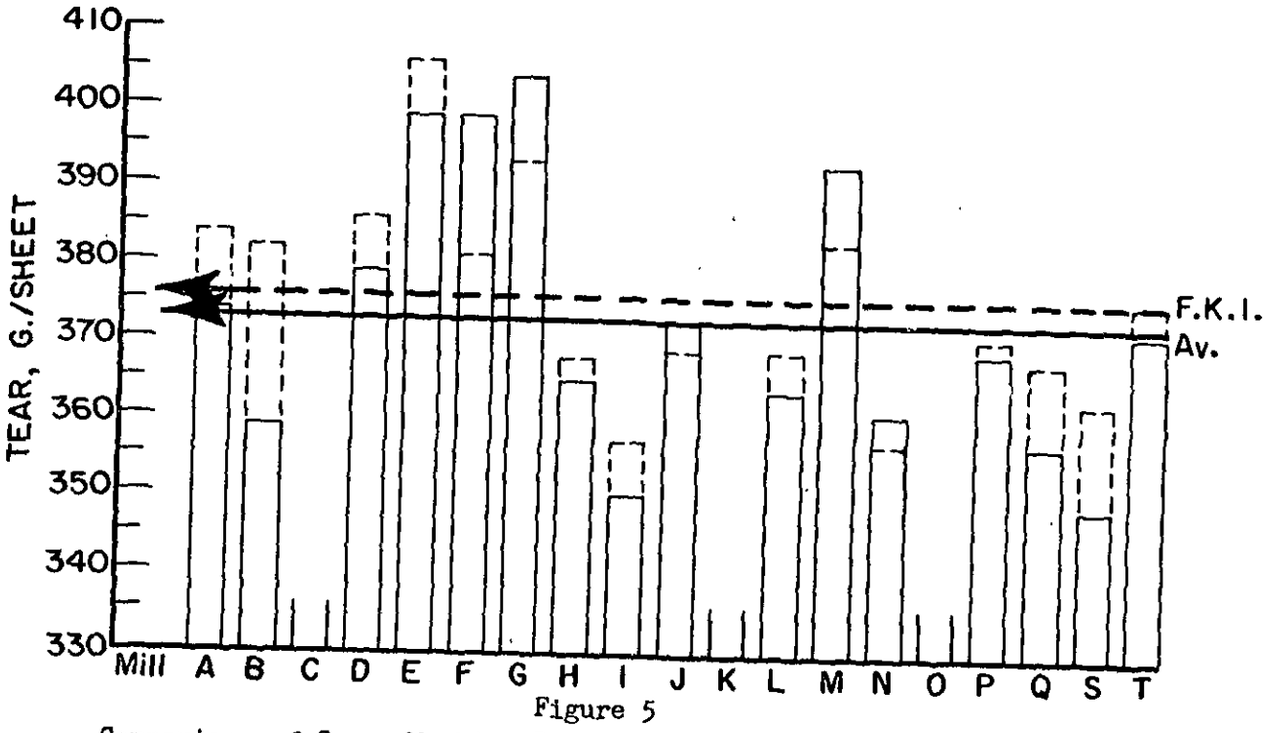



Figure 5

Comparison of Cross-Machine Direction Tear Results for February, 1959

——— Current mill average

- - - - - Cumulative mill average

The F.K.I. index provides a ready means of comparing the current quality with previous results. For example, the current F.K.I. average basis weight is 43.3 lb., and the cumulative F.K.I. average basis weight is also 43.3 lb. Hence, the F.K.I. index for basis weight determined in per cent as indicated above is 100.0 and signifies that the current F.K.I. average basis weight is the same as the cumulative F.K.I. average.

A comparison of the results in Table II and Figure 1 shows that the average basis weight results for all mills conform to the 42-lb. specification set forth in Rule 41. Mills B and P had the highest average basis weight of 44.2 lb. which was approximately 5.2% higher than the 42-lb. specification. The lowest average basis weight of 42.2 lb., which was approximately 0.5% higher than the 42-lb. specification, was associated with Mill L.

The amount by which the mills vary from the 42-lb. specification is shown in Table II-A.

A comparison of the current F.K.I. basis weight average for this period with that for the previous period shows that basis weight has not changed.

A comparison of the average caliper values for the various mills (see Figure 2) shows that the current mill averages varied from a low of 11.9 points for Mill E to a high of 14.3 points for Mill D. The current F.K.I. caliper average is 12.8 points, which is slightly higher than the cumulative F.K.I. average of 12.7 points. The F.K.I. index for caliper is 100.8%.

TABLE II-A

PERCENTAGE DEVIATION FROM 42-LB. BASIS WEIGHT

SPECIFICATION

| Mill Code | Per Cent |
|---|---|
| A | +3.6 |
| B | +5.2 |
| C | -- |
| D | +3.8 |
| E | +3.8 |
| F | +3.6 |
| G | +1.9 |
| H | +3.1 |
| I | +2.6 |
| J | +2.9 |
| K | -- |
| L | +0.5 |
| M | +4.5 |
| N | +2.1 |
| O | -- |
| P | +5.2 |
| Q | +1.7 |
| S | +1.2 |
| T | +2.1 |

The average bursting strength values obtained for each mill are graphically presented in Figure 3. It may be observed in Table II and Figure 3 that the current mill averages for bursting strength ranged from a low of 106 for Mills D and T to a high of 116 for Mill P. The current F.K.I. bursting strength average is 110 p.s.i. gage, which is slightly lower than the cumulative F.K.I. average of 112 p.s.i. gage. The F.K.I. index for bursting strength is 98.2%.

A graphic comparison of the Elmendorf tear results shown in Table II for the various mills is given in Figures 4 and 5. These presentations show that Mill F had the highest machine direction tear average of 364 g./sheet, and Mill I had the lowest average of 299 g./sheet. It may be further noted in Table II that the highest cross-machine direction tear average of 404 g./sheet was obtained on the linerboard from Mill G and that the lowest average of 349 g./sheet was associated withMill S. It may be observed also in Table II that the current F.K.I. averages for machine direction and cross-machine direction Elmendorf tear are both slightly lower than the cumulative F.K.I. averages as indicated by the F.K.I. indexes of 99.7 and 99.2%, respectively.

A comparison of the F.K.I. indexes indicates that, for the current period, the current F.K.I. average for basis weight is the same as the cumulative F.K.I. average, the current F.K.I. average for caliper is higher than the cumulative F.K.I. average, and the current F.K.I. averages for bursting strength, machine direction and cross-machine direction Elmendorf tear are lower than their respective cumulative F.K.I. averages.

In order to compare the variation within a given mill, the test results for each particular mill have been tabulated in Tables III to XXI for Mills A through T, respectively.

In addition to the current and cumulative average, the mill factor and mill index are given for each mill. The cumulative mill average is the average test result obtained on the samples submitted by the particular mill for the previous twelve months excluding the current period. The mill factor and the mill index are obtained as follows:

$$\frac{\text{current mill average}}{\text{cumulative mill average}} \times 100 = \text{mill factor (\%)}$$

$$\frac{\text{current mill average}}{\text{cumulative F.K.I. average}} \times 100 = \text{mill index (\%)}$$

The mill factor and the mill index are a convenient means for comparing the current mill results either with the previous results for that particular mill or with the cumulative F.K.I. results. The reports also present a comparison of the test data obtained at the mills with test data obtained at The Institute of Paper Chemistry. These test data are presented and discussed on subsequent pages of this report.

It may be noted in Tables III through XXI that the test data include information about the sheet finish. The summarized results for the mills which submitted sample lots during the current period are shown in Table XXI-A.

SUMMARY OF INSTITUTE DATA--FEBRUARY 1 THROUGH FEBRUARY 28, 1959

TABLE III

MILL A -- 42-LB. LINERBOARD

| File No. | Finish | Date Recd. | Date Made | Mch. No. | Basis Weight, lb. | | | Caliper, points | | | Bursting Strength, p.s.i. gage | | | Elmendorf Tear, g./sheet | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | In | | | Across | | |
| | | | | | Max. | Min. | Av. | Max. | Min. | Av. | Max. | Min. | Av. | Max. | Min. | Av. | Max. | Min. | Av. |
| 181053 | W.F. | 2/ 9/59 | 1/21/59 | 2 | 44.8 | 43.8 | 44.2 | 13.6 | 13.0 | 13.1 | 135 | 87 | 115 | 368 | 280 | 318[a] | 408 | 336 | 364 |
| 181086 | W.F. | 2/11/59 | 1/28/59 | 2 | 44.4 | 43.0 | 43.8 | 13.4 | 12.5 | 12.9 | 128 | 87 | 109 | 432 | 296 | 356 | 424 | 336 | 387[a] |
| 181087 | W.F. | 2/11/59 | 1/29/59 | 2 | 44.6 | 43.6 | 44.0 | 13.8 | 12.5 | 13.0 | 139 | 84 | 109 | 384 | 280 | 333[a] | 424 | 320 | 365[a] |
| 181274 | W.F. | 2/23/59 | 2/ 1/59 | 2 | 44.6 | 43.2 | 43.9 | 12.4 | 11.6 | 12.1 | 137 | 97 | 118 | 360 | 288 | 323[a] | 400 | 336 | 377[a] |
| 181275 | W.F. | 2/23/59 | 2/ 2/59 | 2 | 44.0 | 43.0 | 43.5 | 12.6 | 12.0 | 12.3 | 137 | 90 | 115 | 360 | 296 | 329 | 424 | 336 | 377[a] |
| 181276 | W.F. | 2/23/59 | 2/ 8/59 | 2 | 43.0 | 42.0 | 42.5 | 12.2 | 12.0 | 12.1 | 141 | 97 | 118 | 368 | 280 | 326 | 408 | 344 | 377[a] |
| 181277 | W.F. | 2/23/59 | 2/ 9/59 | 2 | 43.6 | 42.0 | 42.6 | 12.8 | 12.0 | 12.2 | 137 | 85 | 117 | 344 | 280 | 311[a] | 384 | 328 | 367[a] |
| Current Mill Average: | | | | | | | 43.5 | | | 12.5 | | | 114 | | | 328 | | | 374 |
| Cumulative Mill Average: | | | | | | | 43.3 | | | 12.7 | | | 113 | | | 341 | | | 384 |
| Mill Factor, % | | | | | | | 100.5 | | | 98.4 | | | 100.9 | | | 96.2 | | | 97.4 |
| Mill Index, % | | | | | | | 100.5 | | | 98.4 | | | 101.8 | | | 99.1 | | | 99.5 |

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--FEBRUARY 1 THROUGH FEBRUARY 28, 1959 (continued)

TABLE IV

MILL B -- 42-LB. LINERBOARD

| File No. | Finish | Date Recd. | Date Made | Mch. No. | Basis Weight, lb. | | | Caliper, points | | | Bursting Strength, p.s.i. gage | | | Elmendorf Tear, g./sheet In | | | Elmendorf Tear, g./sheet Across | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Max. | Min. | Av. | Max. | Min. | Av. | Max. | Min. | Av. | Max. | Min. | Av. | Max. | Min. | Av. |
| 181043 | W.F. | 2/ 9/59 | 1/19/59 | 1 | 44.2 | 41.8 | 42.8 | 13.3 | 12.3 | 12.9 | 127 | 88 | 106 | 344 | 248 | 295[a] | 368 | 320 | 349[a] |
| 181044 | W.F. | 2/ 9/59 | 1/22/59 | 1 | 45.6 | 44.0 | 44.4 | 14.1 | 12.9 | 13.4 | 136 | 92 | 109 | 344 | 256 | 301[a] | 368 | 320 | 345[a] |
| 181045 | W.F. | 2/ 9/59 | 1/23/59 | 1 | 45.4 | 43.8 | 44.6 | 14.9 | 13.0 | 13.7 | 128 | 92 | 107 | 360 | 288 | 328[a] | 408 | 336 | 367[a] |
| 181046 | W.F. | 3/ 9/59 | 1/23/59 | 1 | 46.0 | 44.6 | 45.2 | 14.5 | 13.2 | 13.8 | 128 | 96 | 112 | 376 | 272 | 316[a] | 448 | 344 | 379[a] |
| 181047 | W.F. | 2/ 9/59 | 1/23/59 | 1 | 45.0 | 43.4 | 44.2 | 14.0 | 13.0 | 13.3 | 124 | 70 | 105 | 336 | 256 | 304[a] | 384 | 312 | 357[a] |
| Current Mill Average: | | | | | | | 44.2 | | | 13.4 | | | 108 | | | 309 | | | 359 |
| Cumulative Mill Average: | | | | | | | 43.8 | | | 13.1 | | | 108 | | | 345 | | | 382 |
| Mill Factor, % | | | | | | | 100.9 | | | 102.3 | | | 100.0 | | | 89.6 | | | 94.0 |
| Mill Index, % | | | | | | | 102.1 | | | 105.5 | | | 96.4 | | | 93.4 | | | 95.5 |

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--FEBRUARY 1 THROUGH FEBRUARY 28, 1959 (continued)

TABLE V

MILL C -- 42-LB. LINERBOARD

| File No. | Finish | Date Recd. | Date Made | Mch. No. | Basis Weight, lb. | | | Caliper, points | | | Bursting Strength, p.s.i. gage | | | Elmendorf Tear, g./sheet | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | In | | | Across | | |
| | | | | | Max. | Min. | Av. | Max. | Min. | Av. | Max. | Min. | Av. | Max. | Min. | Av. | Max. | Min. | Av. |
| No samples submitted. | | | | | | | | | | | | | | | | | | | |

TABLE VI

MILL D -- 42-LB. LINERBOARD

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 181002 | WF1S | 2/ 4/59 | 1/22/59 | 2 | 45.4 | 43.2 | 44.4 | 15.3 | 13.5 | 14.6 | 128 | 81 | 107 | 408 | 312 | 361[a] | 432 | 352 | 393[a] |
| 181056 | WF1S | 2/ 9/59 | 1/29/59 | 2 | 45.2 | 43.8 | 44.1 | 15.0 | 13.2 | 14.3 | 127 | 90 | 107 | 376 | 304 | 347[a] | 448 | 344 | 376[a] |
| 181272 | WF1S | 2/20/59 | 2/10/59 | 2 | 43.6 | 42.0 | 42.8 | 14.8 | 13.9 | 14.2 | 118 | 86 | 104 | 368 | 304 | 338[a] | 400 | 336 | 356[a] |
| 181279 | WF1S | 2/24/59 | 2/12/59 | 2 | 44.0 | 42.2 | 43.2 | 14.8 | 14.0 | 14.2 | 124 | 90 | 107 | 368 | 304 | 342 | 416 | 336 | 391[a] |
| Current Mill Average: | | | | | | | 43.6 | | | 14.3 | | | 106 | | | 347 | | | 379 |
| Cumulative Mill Average: | | | | | | | 43.5 | | | 13.1 | | | 112 | | | 341 | | | 386 |
| Mill Factor, % | | | | | | | 100.2 | | | 109.2 | | | 94.6 | | | 101.8 | | | 98.2 |
| Mill Index, % | | | | | | | 100.7 | | | 112.6 | | | 94.6 | | | 104.8 | | | 100.8 |

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--FEBRUARY 1 THROUGH FEBRUARY 28, 1959 (continued)

TABLE VII

MILL E -- 42-LB. LINERBOARD

| File No. | Finish | Date Recd. | Date Made | Mch. No. | Basis Weight, lb. | | | Caliper, points | | | Bursting Strength, p.s.i. gage | | | Elmendorf Tear, g./sheet | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | In | | | Across | | |
| | | | | | Max. | Min. | Av. | Max. | Min. | Av. | Max. | Min. | Av. | Max. | Min. | Av. | Max. | Min. | Av. |
| 181050 | W.B. | 2/ 9/59 | 1/23/59 | - | 44.4 | 42.6 | 43.6 | 12.3 | 11.3 | 11.9 | 127 | 95 | 114 | 384 | 336 | 357[a] | 456 | 352 | 392[a] |
| 181051 | W.B. | 2/ 9/59 | 1/27/59 | - | 44.2 | 41.8 | 43.4 | 12.2 | 11.0 | 11.7 | 130 | 88 | 111 | 392 | 312 | 353 | 456 | 384 | 418[a] |
| 181203 | W.B. | 2/16/59 | 2/ 1/59 | - | 44.4 | 42.4 | 43.5 | 11.9 | 11.1 | 11.5 | 127 | 85 | 106 | 384 | 336 | 354[a] | 432 | 368 | 392[a] |
| 181204 | W.B. | 2/16/59 | 2/ 3/59 | - | 44.4 | 41.8 | 43.6 | 12.2 | 11.2 | 11.8 | 142 | 91 | 113 | 368 | 336 | 347[a] | 448 | 368 | 403[a] |
| 181205 | W.B. | 2/16/59 | 2/ 3/59 | - | 44.2 | 42.2 | 43.7 | 12.0 | 11.0 | 11.6 | 131 | 85 | 107 | 400 | 328 | 363 | 448 | 376 | 417[a] |
| 181206 | W.B. | 2/16/59 | 2/ 8/59 | - | 43.8 | 41.8 | 43.0 | 12.2 | 11.9 | 12.1 | 133 | 86 | 112 | 336 | 272 | 307 | 400 | 360 | 375[a] |
| 181265 | W.B. | 2/19/59 | 2/ 9/59 | - | 45.8 | 44.0 | 44.4 | 13.0 | 12.1 | 12.6 | 130 | 84 | 110 | 400 | 304 | 353 | 432 | 368 | 397[a] |
| Current Mill Average: | | | | | | | 43.6 | | | 11.9 | | | 110 | | | 348 | | | 399 |
| Cumulative Mill Average: | | | | | | | 43.0 | | | 12.0 | | | 113 | | | 363 | | | 406 |
| Mill Factor, % | | | | | | | 101.4 | | | 99.2 | | | 97.3 | | | 95.9 | | | 98.3 |
| Mill Index, % | | | | | | | 100.7 | | | 93.7 | | | 98.2 | | | 105.1 | | | 106.1 |

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--FEBRUARY 1 THROUGH FEBRUARY 28, 1959 (continued)

TABLE VIII

MILL F -- 42-LB. LINERBOARD

| File No. | Finish | Date Recd. | Date Made | Mch. No. | Basis Weight, lb. | | | Caliper, points | | | Bursting Strength, p.s.i. gage | | | Elmendorf Tear, g./sheet | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | In | | | Across | | |
| | | | | | Max. | Min. | Av. | Max. | Min. | Av. | Max. | Min. | Av. | Max. | Min. | Av. | Max. | Min. | Av. |
| 181193 | W.F. | 2/13/59 | 2/ 4/59 | - | 43.8 | 42.0 | 42.8 | 13.0 | 11.9 | 12.5 | 134 | 87 | 113 | 392 | 312 | 355 | 440 | 344 | 390[a] |
| 181194 | W.F. | 2/13/59 | 2/ 9/59 | - | 45.0 | 42.0 | 44.2 | 13.1 | 12.0 | 12.6 | 129 | 80 | 107 | 448 | 288 | 371[a] | 448 | 368 | 397[a] |
| 181195 | W.F. | 2/13/59 | 2/ 9/59 | - | 45.6 | 42.6 | 43.9 | 13.1 | 12.0 | 12.4 | 133 | 93 | 112 | 400 | 320 | 366[a] | 464 | 384 | 412[a] |
| 181196 | W.F. | 2/13/59 | 2/10/59 | - | 43.4 | 41.2 | 42.0 | 12.8 | 12.0 | 12.4 | 143 | 83 | 108 | 416 | 320 | 362[a] | 432 | 312 | 373[a] |
| 181227 | W.F. | 2/18/59 | 2/10/59 | - | 44.0 | 41.6 | 42.6 | 12.4 | 11.7 | 12.1 | 127 | 87 | 110 | 432 | 304 | 363[a] | 432 | 360 | 396[a] |
| 181228 | W.F. | 2/18/59 | 2/10/59 | - | 45.2 | 42.4 | 43.7 | 13.2 | 11.3 | 12.3 | 136 | 98 | 118 | 384 | 312 | 348[a] | 432 | 336 | 398[a] |
| 181229 | W.F. | 2/18/59 | 2/11/59 | - | 44.2 | 42.8 | 43.6 | 12.3 | 11.3 | 12.0 | 146 | 84 | 112 | 408 | 344 | 375[a] | 456 | 368 | 393[a] |
| 181230 | W.F. | 2/18/59 | 2/12/59 | - | 46.0 | 44.0 | 44.8 | 13.0 | 12.0 | 12.4 | 140 | 75 | 106 | 432 | 336 | 377[a] | 480 | 400 | 432[a] |
| Current Mill Average: | | | | | | | 43.5 | | | 12.3 | | | 111 | | | 364 | | | 399 |
| Cumulative Mill Average: | | | | | | | 43.6 | | | 11.9 | | | 114 | | | 340 | | | 381 |
| Mill Factor, % | | | | | | | 99.8 | | | 103.4 | | | 97.4 | | | 107.1 | | | 104.7 |
| Mill Index, % | | | | | | | 100.5 | | | 96.9 | | | 99.1 | | | 110.0 | | | 106.1 |

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--FEBRUARY 1 THROUGH FEBRUARY 28, 1959 (continued)

TABLE IX

MILL G -- 42-LB. LINERBOARD

| File No. | Finish | Date Recd. | Date Made | Mch. No. | Basis Weight, lb. | | | Caliper, points | | | Bursting Strength, p.s.i. gage | | | Elmendorf Tear, g./sheet | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | In | | | Across | | |
| | | | | | Max. | Min. | Av. | Max. | Min. | Av. | Max. | Min. | Av. | Max. | Min. | Av. | Max. | Min. | Av. |
| 181038 | ---- | 2/ 6/59 | 1/30/59 | 2 | 44.4 | 42.0 | 43.0 | 13.2 | 12.0 | 12.9 | 139 | 89 | 114 | 448 | 320 | 359[a] | 480 | 368 | 423[a] |
| 181085 | ---- | 2/11/59 | 2/ 5/59 | 2 | 43.8 | 42.2 | 43.1 | 13.7 | 12.3 | 12.8 | 134 | 76 | 107 | 392 | 304 | 334[a] | 424 | 352 | 394[a] |
| 181224 | ---- | 2/17/59 | 2/10/59 | 2 | 43.6 | 41.8 | 42.3 | 13.2 | 12.2 | 12.9 | 127 | 86 | 109 | 416 | 320 | 351[a] | 424 | 368 | 395[a] |
| Current Mill Average: | | | | | | | 42.8 | | | 12.9 | | | 110 | | | 348 | | | 404 |
| Cumulative Mill Average: | | | | | | | 42.4 | | | 12.8 | | | 112 | | | 346 | | | 393 |
| Mill Factor, % | | | | | | | 100.9 | | | 100.8 | | | 98.2 | | | 100.6 | | | 102.8 |
| Mill Index, % | | | | | | | 98.8 | | | 101.6 | | | 98.2 | | | 105.1 | | | 107.4 |

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--FEBRUARY 1 THROUGH FEBRUARY 28, 1959 (continued)

TABLE X

MILL H -- 42-LB. LINERBOARD

| File No. | Finish | Date Recd. | Date Made | Mch. No. | Basis Weight, lb. | | | Caliper, points | | | Bursting Strength, p.s.i. gage | | | Elmendorf Tear, g./sheet | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | In | | | Across | | |
| | | | | | Max. | Min. | Av. | Max. | Min. | Av. | Max. | Min. | Av. | Max. | Min. | Av. | Max. | Min. | Av. |
| 180962 | W.F. | 2/ 2/59 | 1/21/59 | - | 44.0 | 42.4 | 43.2 | 13.4 | 12.8 | 13.1 | 123 | 81 | 103 | 376 | 272 | 332[a] | 400 | 352 | 379[a] |
| 180963 | W.F. | 2/ 2/59 | 1/22/59 | - | 44.0 | 42.8 | 43.7 | 12.6 | 11.9 | 12.2 | 118 | 95 | 109 | 368 | 280 | 332[a] | 400 | 312 | 373[a] |
| 180964 | W.F. | 2/ 2/59 | 1/23/59 | - | 43.6 | 42.2 | 42.9 | 12.8 | 12.0 | 12.3 | 132 | 102 | 116 | 376 | 304 | 333[a] | 392 | 352 | 373[a] |
| 181040 | W.F. | 2/ 9/59 | 2/ 4/59 | - | 44.0 | 41.2 | 42.0 | 13.3 | 12.1 | 12.5 | 126 | 101 | 113 | 360 | 264 | 295[a] | 368 | 312 | 349[a] |
| 181041 | W.F. | 2/ 9/59 | 2/ 5/59 | - | 45.6 | 44.0 | 44.9 | 13.1 | 12.2 | 12.7 | 127 | 94 | 118 | 368 | 296 | 332[a] | 400 | 344 | 375[a] |
| 181042 | W.F. | 2/ 9/59 | 2/ 6/59 | - | 45.0 | 43.4 | 44.2 | 13.0 | 12.0 | 12.6 | 126 | 100 | 113 | 400 | 312 | 373[a] | 432 | 336 | 383[a] |
| 181266 | W.F. | 2/19/59 | 2/11/59 | - | 42.8 | 41.8 | 42.2 | 13.1 | 12.1 | 12.8 | 126 | 86 | 108 | 352 | 272 | 310 | 368 | 320 | 343[a] |
| 181267 | W.F. | 2/19/59 | 2/12/59 | - | 43.0 | 42.0 | 42.6 | 13.0 | 11.8 | 12.6 | 122 | 91 | 108 | 344 | 272 | 307[a] | 368 | 312 | 345[a] |
| 181268 | W.F. | 2/19/59 | 2/13/59 | - | 44.0 | 43.0 | 43.8 | 13.9 | 13.0 | 13.5 | 124 | 80 | 102 | 376 | 272 | 327[a] | 416 | 320 | 364[a] |
| Current Mill Average: | | | | | | | 43.3 | | | 12.7 | | | 110 | | | 327 | | | 365 |
| Cumulative Mill Average: | | | | | | | 44.2 | | | 12.8 | | | 110 | | | 334 | | | 368 |
| Mill Factor, % | | | | | | | 98.0 | | | 99.2 | | | 100.0 | | | 97.9 | | | 99.2 |
| Mill Index, % | | | | | | | 100.0 | | | 100.0 | | | 98.2 | | | 98.8 | | | 97.1 |

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--FEBRUARY 1 THROUGH FEBRUARY 28, 1959 (continued)

TABLE XI

MILL I -- 42-LB. LINERBOARD

| File No. | Finish | Date Recd. | Date Made | Mch. No. | Basis Weight, lb. | | | Caliper, points | | | Bursting Strength, p.s.i. gage | | | Elmendorf Tear, g./sheet | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | In | | | Across | | |
| | | | | | Max. | Min. | Av. | Max. | Min. | Av. | Max. | Min. | Av. | Max. | Min. | Av. | Max. | Min. | Av. |
| 130968 | W.F. | 2/ 2/59 | 1/12/59 | 1 | 44.2 | 42.6 | 43.6 | 14.1 | 12.7 | 13.3 | 124 | 84 | 106 | 352 | 256 | 303[a] | 360 | 320 | 343[a] |
| 180969 | W.F. | 2/ 2/59 | 1/15/59 | 1 | 43.6 | 42.0 | 42.8 | 14.5 | 13.7 | 14.1 | 128 | 73 | 101 | 336 | 272 | 297[a] | 392 | 312 | 355[a] |
| 180970 | W.F. | 2/ 2/59 | 1/18/59 | 1 | 43.6 | 41.9 | 42.6 | 14.2 | 12.5 | 13.1 | 133 | 97 | 117 | 336 | 264 | 301[a] | 360 | 320 | 343[a] |
| 180971 | W.F. | 2/ 2/59 | 1/23/59 | 1 | 44.0 | 42.8 | 43.4 | 13.4 | 11.9 | 12.7 | 135 | 95 | 118 | 328 | 272 | 296[a] | 384 | 336 | 359[a] |
| Current Mill Average: | | | | | | | 43.1 | | | 13.3 | | | 110 | | | 299 | | | 350 |
| Cumulative Mill Average: | | | | | | | 43.0 | | | 13.4 | | | 114 | | | 292 | | | 357 |
| Mill Factor, % | | | | | | | 100.2 | | | 99.3 | | | 96.5 | | | 102.4 | | | 98.0 |
| Mill Index, % | | | | | | | 99.5 | | | 104.7 | | | 98.2 | | | 90.3 | | | 93.1 |

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--FEBRUARY 1 THROUGH FEBRUARY 28, 1959 (continued)

TABLE XII

MILL J -- 42-LB. LINERBOARD

| File No. | Finish | Date Recd. | Date Made | Mch. No. | Basis Weight, lb. | | | Caliper, points | | | Bursting Strength, p.s.i. gage | | | Elmendorf Tear, g./sheet | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | In | | | Across | | |
| | | | | | Max. | Min. | Av. | Max. | Min. | Av. | Max. | Min. | Av. | Max. | Min. | Av. | Max. | Min. | Av. |
| 180977 | WF1S | 2/ 2/59 | 1/19/59 | 1 | 45.2 | 42.0 | 43.6 | 13.4 | 12.0 | 12.7 | 130 | 88 | 109 | 352 | 280 | 313[a] | 424 | 352 | 377[a] |
| 180978 | WF1S | 2/ 2/59 | 1/19/59 | 1 | 44.0 | 41.8 | 42.8 | 13.0 | 11.7 | 12.3 | 127 | 79 | 109 | 368 | 288 | 325[a] | 400 | 336 | 369[a] |
| Current Mill Average; | | | | | | | 43.2 | | | 12.5 | | | 109 | | | 319 | | | 373 |
| Cumulative Mill Average: | | | | | | | 43.1 | | | 13.0 | | | 109 | | | 308 | | | 369 |
| Mill Factor, % | | | | | | | 100.2 | | | 96.2 | | | 100.0 | | | 103.6 | | | 101.1 |
| Mill Index, % | | | | | | | 99.8 | | | 98.4 | | | 97.3 | | | 96.4 | | | 99.2 |

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--FEBRUARY 1 THROUGH FEBRUARY 28, 1959 (continued)

TABLE XIII

MILL K — 42-LB. LINERBOARD

| File No. | Finish | Date Recd. | Date Made | Mch. No. | Basis Weight, lb. | | | Caliper, points | | | Bursting Strength, p.s.i. gage | | | Elmendorf Tear, g./sheet | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | In | | | Across | | |
| | | | | | Max. | Min. | Av. | Max. | Min. | Av. | Max. | Min. | Av. | Max. | Min. | Av. | Max. | Min. | Av. |
| No samples submitted. | | | | | | | | | | | | | | | | | | | |

TABLE XIV

MILL L -- 42-LB. LINERBOARD

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 181084 | WF1S | 2/11/59 | 2/ 2/59 | 1 | 43.0 | 41.4 | 42.2 | 13.6 | 12.4 | 12.9 | 122 | 91 | 108 | 368 | 272 | 309 | 440 | 312 | 367[a] |
| 181039 | WF1S | 2/ 9/59 | 2/ 2/59 | 1 | 43.4 | 41.8 | 42.2 | 13.3 | 12.2 | 12.9 | 131 | 88 | 106 | 368 | 264 | 311[a] | 384 | 328 | 361[a] |
| Current Mill Average: | | | | | | | 42.2 | | | 12.9 | | | 107 | | | 310 | | | 364 |
| Cumulative Mill Average: | | | | | | | 43.1 | | | 13.1 | | | 112 | | | 323 | | | 369 |
| Mill Factor, % | | | | | | | 97.9 | | | 98.5 | | | 95.5 | | | 96.0 | | | 98.6 |
| Mill Index, % | | | | | | | 97.5 | | | 101.6 | | | 95.5 | | | 93.7 | | | 96.8 |

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--FEBRUARY 1 THROUGH FEBRUARY 28, 1959 (continued)

TABLE XV

MILL M -- 42-LB. LINERBOARD

| File No. | Finish | Date Recd. | Date Made | Mch. No. | Basis Weight, lb. | | | Caliper, points | | | Bursting Strength, p.s.i. gage | | | Elmendorf Tear, g./sheet | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | In | | | Across | | |
| | | | | | Max. | Min. | Av. | Max. | Min. | Av. | Max. | Min. | Av. | Max. | Min. | Av. | Max. | Min. | Av. |
| 180965 | W.F. | 2/ 2/59 | 1/19/59 | 2 | 44.8 | 43.2 | 44.1 | 12.8 | 11.9 | 12.4 | 123 | 98 | 113 | 384 | 312 | 353[a] | 440 | 384 | 411[a] |
| 180966 | W.F. | 2/ 2/59 | 1/19/59 | 2 | 44.0 | 42.6 | 43.5 | 12.4 | 12.0 | 12.1 | 128 | 96 | 112 | 400 | 312 | 359[a] | 424 | 360 | 388[a] |
| 180967 | W.F. | 2/ 2/59 | 1/24/59 | 2 | 44.4 | 42.8 | 43.5 | 12.6 | 11.9 | 12.2 | 140 | 110 | 120 | 400 | 312 | 357[a] | 416 | 352 | 388[a] |
| 181048 | W.F. | 2/ 9/59 | 2/ 2/59 | 1 | 44.8 | 44.2 | 44.5 | 13.2 | 12.3 | 12.8 | 140 | 90 | 116 | 392 | 312 | 349[a] | 432 | 368 | 400[a] |
| 181049 | W.F. | 2/ 9/59 | 2/ 3/59 | 2 | 44.4 | 43.6 | 44.0 | 12.8 | 12.0 | 12.3 | 133 | 98 | 116 | 352 | 248 | 309[a] | 392 | 336 | 363[a] |
| 181225 | W.F. | 2/18/59 | 2/ 9/59 | 2 | 45.0 | 43.0 | 44.0 | 13.3 | 12.4 | 13.0 | 137 | 87 | 113 | 416 | 304 | 355[a] | 440 | 368 | 398[a] |
| 181226 | W.F. | 2/18/59 | 2/11/59 | 2 | 44.0 | 42.4 | 43.5 | 13.0 | 11.8 | 12.2 | 132 | 102 | 118 | 392 | 288 | 338[a] | 432 | 360 | 400[a] |
| Current Mill Average: | | | | | | | 43.9 | | | 12.4 | | | 115 | | | 346 | | | 393 |
| Cumulative Mill Average: | | | | | | | 43.7 | | | 12.3 | | | 117 | | | 333 | | | 383 |
| Mill Factor, % | | | | | | | 100.5 | | | 100.8 | | | 98.3 | | | 103.9 | | | 102.6 |
| Mill Index, % | | | | | | | 101.4 | | | 97.6 | | | 102.7 | | | 104.5 | | | 104.5 |

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--FEBRUARY 1 THROUGH FEBRUARY 28, 1959 (continued)

TABLE XVI

MILL N -- 42-LB. LINERBOARD

| File No. | Finish | Date Recd. | Date Made | Mch. No. | Basis Weight, lb. | | | Caliper, points | | | Bursting Strength, p.s.i. gage | | | Elmendorf Tear, g./sheet | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | In | | | Across | | |
| | | | | | Max. | Min. | Av. | Max. | Min. | Av. | Max. | Min. | Av. | Max. | Min. | Av. | Max. | Min. | Av. |
| 180974 | W.F. | 2/ 2/59 | 1/ 9/59 | 1 | 43.6 | 41.6 | 42.4 | 13.7 | 12.4 | 13.1 | 122 | 83 | 106 | 400 | 288 | 337 | 400 | 320 | 363[a] |
| 181052 | W.F. | 2/ 9/59 | 1/13/59 | 1 | 45.0 | 42.2 | 44.0 | 14.0 | 12.5 | 13.2 | 133 | 88 | 117 | 336 | 248 | 296 | 408 | 328 | 363[a] |
| 181112 | W.F. | 2/12/59 | 1/20/59 | 1 | 44.0 | 40.4 | 42.2 | 14.0 | 12.6 | 13.4 | 134 | 85 | 106 | 352 | 256 | 295[a] | 416 | 320 | 356[a] |
| Current Mill Average: | | | | | | | 42.9 | | | 13.2 | | | 110 | | | 310 | | | 361 |
| Cumulative Mill Average: | | | | | | | 43.6 | | | 12.8 | | | 111 | | | 295 | | | 357 |
| Mill Factor, % | | | | | | | 98.4 | | | 103.1 | | | 99.1 | | | 105.1 | | | 101.1 |
| Mill Index, % | | | | | | | 99.1 | | | 103.9 | | | 98.2 | | | 93.7 | | | 96.0 |

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--FEBRUARY 1 THROUGH FEBRUARY 28, 1959 (continued)

TABLE XVII

MILL O -- 42-LB. LINERBOARD

| File No. | Finish | Date Recd. | Date Made | Mch. No. | Basis Weight, lb. Max. | Basis Weight, lb. Min. | Basis Weight, lb. Av. | Caliper, points Max. | Caliper, points Min. | Caliper, points Av. | Bursting Strength, p.s.i. gage Max. | Bursting Strength, p.s.i. gage Min. | Bursting Strength, p.s.i. gage Av. | Elmendorf Tear, g./sheet In Max. | Elmendorf Tear, g./sheet In Min. | Elmendorf Tear, g./sheet In Av. | Elmendorf Tear, g./sheet Across Max. | Elmendorf Tear, g./sheet Across Min. | Elmendorf Tear, g./sheet Across Av. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| No samples submitted. | | | | | | | | | | | | | | | | | | | |

TABLE XVIII

MILL P -- 42-LB. LINERBOARD

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 180979 | W.F. | 2/ 2/59 | 1/31/59 | - | 45.6 | 43.8 | 44.4 | 12.8 | 11.3 | 12.1 | 127 | 90 | 111 | 392 | 304 | 358[a] | 400 | 344 | 366[a] |
| 180980 | W.F. | 2/ 2/59 | 1/19/59 | - | 45.0 | 43.4 | 44.0 | 13.4 | 12.2 | 12.9 | 128 | 97 | 115 | 360 | 296 | 332[a] | 400 | 344 | 374[a] |
| 181201 | W.F. | 2/16/59 | 1/19/59 | - | 47.8 | 44.0 | 44.4 | 13.0 | 12.0 | 12.5 | 140 | 106 | 116 | 368 | 320 | 340 | 392 | 336 | 369[a] |
| 181202 | W.F. | 2/16/59 | 1/19/59 | - | 44.4 | 43.8 | 44.1 | 12.3 | 12.0 | 12.1 | 140 | 97 | 121 | 384 | 328 | 347 | 400 | 336 | 367[a] |
| Current Mill Average: | | | | | | | 44.2 | | | 12.4 | | | 116 | | | 344 | | | 369 |
| Cumulative Mill Average: | | | | | | | 43.6 | | | 12.4 | | | 112 | | | 358 | | | 371 |
| Mill Factor, % | | | | | | | 101.4 | | | 100.0 | | | 103.6 | | | 96.1 | | | 99.5 |
| Mill Index, % | | | | | | | 102.1 | | | 97.6 | | | 103.6 | | | 103.9 | | | 98.1 |

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--FEBRUARY 1 THROUGH FEBRUARY 28, 1959 (continued)

TABLE XIX

MILL Q -- 42-LB. LINERBOARD

| File No. | Finish | Date Recd. | Date Made | Mch. No. | Basis Weight, lb. | | | Caliper, points | | | Bursting Strength, p.s.i. gage | | | Elmendorf Tear, g./sheet | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | In | | | Across | | |
| | | | | | Max. | Min. | Av. | Max. | Min. | Av. | Max. | Min. | Av. | Max. | Min. | Av. | Max. | Min. | Av. |
| 180975 | W.F. | 2/ 2/59 | 1/27/59 | 1 | 43.8 | 42.0 | 42.8 | 12.4 | 11.7 | 12.1 | 142 | 88 | 112 | 344 | 272 | 309[a] | 368 | 312 | 343[a] |
| 180976 | W.F. | 2/ 2/59 | 1/27/59 | 1 | 43.8 | 42.2 | 43.0 | 12.9 | 11.8 | 12.3 | 141 | 79 | 112 | 368 | 288 | 331[a] | 384 | 320 | 350[a] |
| 181057 | W.F. | 2/ 9/59 | 1/31/59 | 2 | 44.0 | 42.0 | 42.8 | 12.9 | 11.8 | 12.4 | 131 | 92 | 110 | 352 | 280 | 314[a] | 384 | 320 | 347[a] |
| 181111 | W.F. | 2/12/59 | 1/31/59 | 2 | 44.0 | 42.2 | 43.2 | 13.0 | 11.4 | 12.1 | 143 | 92 | 114 | 352 | 256 | 301 | 424 | 328 | 366[a] |
| 181207 | W.F. | 2/16/59 | 2/ 7/59 | 2 | 43.8 | 41.8 | 42.4 | 12.5 | 11.7 | 12.0 | 135 | 100 | 112 | 376 | 272 | 311[a] | 400 | 336 | 360[a] |
| 181208 | W.F. | 2/16/59 | 2/ 6/59 | 2 | 43.4 | 42.0 | 42.4 | 12.3 | 11.6 | 12.0 | 128 | 87 | 109 | 336 | 272 | 309 | 392 | 344 | 371[a] |
| 181209 | W.F. | 2/16/59 | 2/ 6/59 | 2 | 43.4 | 41.4 | 42.2 | 12.3 | 11.4 | 12.0 | 138 | 100 | 114 | 384 | 280 | 331[a] | 392 | 344 | 363[a] |
| Current Mill Average: | | | | | | | 42.7 | | | 12.1 | | | 112 | | | 315 | | | 357 |
| Cumulative Mill Average: | | | | | | | 43.3 | | | 12.3 | | | 112 | | | 310 | | | 368 |
| Mill Factor, % | | | | | | | 98.6 | | | 98.4 | | | 100.0 | | | 101.6 | | | 97.0 |
| Mill Index, % | | | | | | | 98.6 | | | 95.3 | | | 100.0 | | | 95.2 | | | 94.9 |

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--FEBRUARY 1 THROUGH FEBRUARY 28, 1959 (continued)

TABLE XX

MILL S -- 42-LB. LINERBOARD

| File No. | Finish | Date Recd. | Date Made | Mch. No. | Basis Weight, lb. | | | Caliper, points | | | Bursting Strength, p.s.i. gage | | | Elmendorf Tear, g./sheet | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | In | | | Across | | |
| | | | | | Max. | Min. | Av. | Max. | Min. | Av. | Max. | Min. | Av. | Max. | Min. | Av. | Max. | Min. | Av. |
| 180972 | WF1S | 2/ 2/59 | 1/16/59 | 2 | 44.0 | 41.8 | 43.0 | 14.1 | 13.0 | 13.6 | 120 | 95 | 108 | 352 | 272 | 297[a] | 392 | 272 | 346[a] |
| 180973 | WF1S | 2/ 2/59 | 1/19/59 | 2 | 44.0 | 40.6 | 42.0 | 13.1 | 12.3 | 12.6 | 137 | 86 | 110 | 384 | 280 | 320 | 400 | 312 | 353[a] |
| Current Mill Average: | | | | | | | 42.5 | | | 13.1 | | | 109 | | | 308 | | | 349 |
| Cumulative Mill Average: | | | | | | | 43.0 | | | 13.5 | | | 112 | | | 329 | | | 363 |
| Mill Factor, % | | | | | | | 98.8 | | | 97.0 | | | 97.3 | | | 93.6 | | | 96.1 |
| Mill Index, % | | | | | | | 98.2 | | | 103.1 | | | 97.3 | | | 93.1 | | | 92.8 |

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--FEBRUARY 1 THROUGH FEBRUARY 28, 1959 (continued)

TABLE XXI

MILL T -- 42-LB. LINERBOARD

| File No. | Finish | Date Recd. | Date Made | Mch. No. | Basis Weight, lb. | | | Caliper, points | | | Bursting Strength, p.s.i. gage | | | Elmendorf Tear, g./sheet | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | In | | | Across | | |
| | | | | | Max. | Min. | Av. | Max. | Min. | Av. | Max. | Min. | Av. | Max. | Min. | Av. | Max. | Min. | Av. |
| 181054 | W. | 2/ 9/59 | 1/27/59 | 4 | 44.0 | 41.8 | 42.8 | 12.3 | 11.9 | 12.1 | 127 | 74 | 103 | 408 | 336 | 375[a] | 400 | 336 | 369[a] |
| 181055 | W. | 2/ 9/59 | 2/ 4/59 | 2 | 42.8 | 40.4 | 42.0 | 13.9 | 13.0 | 13.3 | 123 | 92 | 107 | 344 | 296 | 320[a] | 448 | 336 | 370[a] |
| 181222 | W. | 2/17/59 | 2/ 6/59 | 4 | 44.0 | 42.0 | 42.8 | 13.0 | 11.8 | 12.5 | 122 | 88 | 108 | 448 | 344 | 375[a] | 376 | 312 | 342[a] |
| 181223 | W. | 2/17/59 | 2/12/59 | 4 | 45.8 | 42.2 | 43.9 | 13.4 | 11.8 | 12.7 | 122 | 82 | 107 | 416 | 336 | 378 | 464 | 368 | 406[a] |
| Current Mill Average: | | | | | | | 42.9 | | | 12.6 | | | 106 | | | 362 | | | 372 |
| Cumulative Mill Average: | | | | | | | 43.0 | | | 13.2 | | | 107 | | | 363 | | | 376 |
| Mill Factor, % | | | | | | | 99.8 | | | 95.5 | | | 99.1 | | | 99.7 | | | 98.9 |
| Mill Index, % | | | | | | | 99.1 | | | 99.2 | | | 94.6 | | | 109.4 | | | 98.9 |

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

TABLE XXI-A

SUMMARY OF SHEET FINISH DATA

| Mill Code | Number of Sample Lots | | |
|---|---|---|---|
| | Water Finish | Water Finish One Side | Other |
| A | 7 | | |
| B | 5 | | |
| C | No sample submitted. | | |
| D | | 4 | |
| E | 7 | | |
| F | 8 | | |
| G | | | 3[a] |
| H | 9 | | |
| I | 4 | | |
| J | | 2 | |
| K | No samples submitted. | | |
| L | | 2 | |
| M | 7 | | |
| N | 3 | | |
| O | No samples submitted. | | |
| P | 4 | | |
| Q | 7 | | |
| S | | 2 | |
| T | 4 | | |
| Totals | 65 | 10 | 3 |

[a] Unidentified.

## PART II. COMPARISON OF RESULTS OBTAINED AT THE INSTITUTE OF PAPER CHEMISTRY WITH THOSE OBTAINED AT THE MILLS

As a supplementary part of the Continuous Baseline Study, comparisons of the mill test results with those obtained at The Institute of Paper Chemistry on corresponding samples have been included in this report. Mill test conditions are shown in Table XXII, where it may be noted that the atmospheric conditions used prior to and during the testing period were relatively uniform for the mills which reported this information. However, the preconditioning and conditioning time periods varied considerably.

A summary of the Institute and mill test results for the current period is shown in Table XXIII, and a comparison of differences between Institute and mill test results is given in Table XXIV for the current period and the two previous periods.

A comparison of the test data in Tables XXIII and XXIV reveals the level of agreement between mill and Institute data for basis weight, caliper, bursting strength, and Elmendorf tear. Table XXIII shows the over-all average difference between Institute and mill results for each of these tests based on the data for all sample lots submitted by each mill for the current period. In addition, the maximum difference encountered in comparing the Institute and mill test results for a given sample lot is shown. In Table XXIV, the over-all average differences shown for each test in Table XXIII have been calculated on a percentage basis for each mill. In addition, for purposes of comparison, the average percentage differences for the preceding two periods are shown.

## TABLE XXII

## PRECONDITIONING AND CONDITIONING DATA FOR THE MILL TESTS

| Mill Code | Preconditioning R.H., % | Preconditioning Temperature, °F. | Preconditioning Time, hr. | Conditioning R.H., % | Conditioning Temperature, °F. | Conditioning Time, hr. |
|---|---|---|---|---|---|---|
| A | | None | | 50 | 73 | 24 |
| B | 50 | 73 | 24 | 50 | 73 | 24 |
| C | No samples submitted. | | | | | |
| D | 50 | 70 | 120 | 50-52 | 70-71 | 120 |
| E | | None | | 46-50 | 72-73 | 48 |
| F | 49-50 | 73 | 48 | 50 | 73 | -- |
| G | 50 | 72 | 18-48 | 50 | 72 | 18-48 |
| H | 35-36 | 77-79 | 8 | 48-52 | 72-73 | 16 |
| I | | None | | 30-32 | 72-80 | -- |
| J | 50 | 73 | 96 | 50 | 73 | 2 |
| K | No samples submitted. | | | | | |
| L | | None | | 48-61 | 82 | -- |
| M | | None | | 50 | 73 | 24 |
| N | 46-48 | 67-71 | 0.5 | 40-50 | 73 | 48-72 |
| O | No samples submitted. | | | | | |
| P | | None | | 50 | 73 | 0.5 |
| Q | 50 | 73 | 24 | 50 | 73 | 24 |
| S | 50 | 72 | 24 | | None | |
| T | | None | | 53 | 73 | -- |

## TABLE XXIII

### SUMMARY OF TEST RESULT COMPARISONS (AVERAGE MILL AND INSTITUTE RESULTS)

| Mills* | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | S | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| No. Samples Compared | 7 | 5 | 0 | 4 | 7 | 8 | 3 | 9 | 4 | 2 | 0 | 2 | 7 | 3 | 0 | 4 | 7 | 2 | 4 |
| **Basis Weight** | | | | | | | | | | | | | | | | | | | |
| Institute | 43.5 | 44.2 | | 43.6 | 43.6 | 43.5 | 42.8 | 43.3 | 43.1 | 43.2 | | 42.2 | 43.9 | 42.9 | | 44.2 | 42.7 | 42.5 | 42.9 |
| Mill | 43.3 | 43.7 | | 43.1 | 42.6 | 43.2 | 41.9 | 43.3 | 42.0 | 42.6 | | 41.7 | 43.2 | 42.4 | | 42.6 | 42.6 | 43.4 | 42.5 |
| Av. Diff.** | -0.2 | -0.5 | | -0.5 | -1.0 | -0.3 | -0.9 | 0.0 | -1.1 | -0.6 | | -0.5 | -0.7 | -0.5 | | -1.6 | -0.1 | +0.9 | -0.4 |
| Max. Diff.*** | -0.6 | -0.9 | | -0.9 | -1.2 | -0.5 | -1.1 | +1.5 | -1.5 | -0.9 | | -0.9 | -1.2 | -1.0 | | -1.9 | -0.4 | +1.3 | -0.7 |
| **Caliper** | | | | | | | | | | | | | | | | | | | |
| Institute | 12.5 | 13.4 | | 14.3 | 11.9 | 12.3 | 12.9 | 12.7 | 13.3 | 12.5 | | 12.9 | 12.4 | 13.2 | | 12.4 | 12.1 | 13.1 | 12.6 |
| Mill | 12.2 | 12.8 | | 13.9 | 11.4 | 12.2 | 12.0 | 12.4 | 13.0 | 12.0 | | 12.2 | 12.1 | 13.3 | | 12.2 | 11.8 | 12.6 | 12.1 |
| Av. Diff.** | -0.3 | -0.6 | | -0.4 | -0.5 | -0.1 | -0.9 | -0.3 | -0.3 | -0.5 | | -0.7 | -0.3 | +0.1 | | -0.2 | -0.3 | -0.5 | -0.5 |
| Max. Diff.*** | -0.9 | -0.7 | | -0.5 | -0.6 | -0.4 | -1.2 | -0.5 | -0.7 | -0.5 | | -0.7 | -0.7 | +0.3 | | -0.4 | -0.6 | -0.6 | -0.7 |
| **Bursting Strength** | | | | | | | | | | | | | | | | | | | |
| Institute | 114 | 108 | | 106 | 110 | 111 | 110 | 110 | 110 | 109 | | 107 | 115 | 110 | | 116 | 112 | 109 | 106 |
| Mill | 112 | 108 | | 105 | 115 | 112 | 107 | 112 | 110 | 105 | | 108 | 115 | 116 | | 116 | 111 | 113 | 110 |
| Av. Diff.** | -2 | 0 | | -1 | +5 | +1 | -3 | +2 | 0 | -4 | | +1 | 0 | +6 | | 0 | -1 | +4 | +4 |
| Max. Diff.*** | -6 | ±1 | | -2 | +14 | +8 | -7 | +10 | +8 | -4 | | +2 | -5 | +11 | | ±3 | -5 | +4 | +6 |
| **Tearing Strength, in** | | | | | | | | | | | | | | | | | | | |
| Institute | 328 | 309 | | 347 | 348 | 364 | 348 | 327 | 299 | 319 | | 310 | 346 | 310 | | 344 | 315 | 308 | 362 |
| Mill | 338 | 268 | | 317 | 308 | 385 | — | 315 | 229 | 286 | | 320 | 333 | 308 | | 336 | 286 | 307 | 368 |
| Av. Diff.** | +10 | -41 | | -30 | -40 | +21 | -- | -12 | -70 | -33 | | +10 | -13 | -2 | | -8 | -29 | -1 | +6 |
| Max. Diff.*** | +24 | -64 | | -50 | -64 | +33 | -- | -40 | -123 | -43 | | +25 | -33 | -30 | | -28 | -66 | -13 | +30 |
| **Tearing Strength, across** | | | | | | | | | | | | | | | | | | | |
| Institute | 374 | 359 | | 379 | 399 | 399 | 404 | 365 | 350 | 373 | | 364 | 393 | 361 | | 369 | 357 | 349 | 372 |
| Mill | 391 | 353 | | 395 | 387 | 414 | — | 353 | 324 | 367 | | 393 | 395 | 367 | | 376 | 344 | 361 | 359 |
| Av. Diff.** | +17 | -6 | | +16 | -12 | +15 | — | -12 | -26 | -6 | | +29 | +2 | +6 | | +7 | -13 | +12 | -13 |
| Max. Diff.*** | +33 | -21 | | +83 | -22 | +38 | — | -23 | -83 | -10 | | +43 | +27 | +12 | | +18 | -22 | +23 | -32 |

* Comparison based on averages involved only those samples on which mill test data were submitted.

** Average difference is the difference between the Institute mill average and the mill average based on mill test data.

*** Maximum difference encountered in comparing the Institute average and the mill averages for any sample submitted by that particular mill.

## TABLE XXIV

### COMPARISON OF INSTITUTE-MILL DIFFERENCES BY PERIODS
Average Difference, Per Cent

| Mill | Period | Basis Weight | Caliper | Bursting Strength | Tear, in | Tear, across |
|---|---|---|---|---|---|---|
| A | Current | -0.5 | -2 | -2 | +3 | +5 |
| | 140th | -2 | -2 | -0.9 | +6 | +4 |
| | 139th | -0.9 | -2 | -0.9 | -1 | +1 |
| B | Current | -1 | -4 | 0 | -13 | -2 |
| | 140th | -0.5 | -3 | +2 | -5 | +3 |
| | 139th | -0.9 | -4 | -3 | -9 | -0.3 |
| C | Current | — | — | — | — | — |
| | 140th | -2 | -3 | -3 | -20 | -2 |
| | 139th | — | — | — | — | — |
| D | Current | -1 | -3 | -0.9 | -9 | -4 |
| | 140th | -0.7 | -3 | +2 | -3 | +1 |
| | 139th | -0.2 | -2 | -5 | -11 | -2 |
| E | Current | -2 | -4 | +5 | -11 | -3 |
| | 140th | -3 | -4 | +2 | -13 | -5 |
| | 139th | -3 | -5 | +3 | -13 | -6 |
| F | Current | -0.7 | -0.8 | +0.9 | +6 | +4 |
| | 140th | -0.7 | -2 | +3 | +1 | +2 |
| | 139th | -2 | -2 | 0 | -9 | -2 |
| G | Current | -2 | -7 | -3 | — | — |
| | 140th | -2 | -3 | +0.9 | — | — |
| | 139th | — | — | — | — | — |
| H | Current | 0 | -2 | +2 | -4 | -3 |
| | 140th | -0.5 | -3 | 0 | -6 | -7 |
| | 139th | -3 | -3 | -2 | -1 | -4 |
| I | Current | -3 | -2 | -0 | -23 | -7 |
| | 140th | -2 | -4 | -0.9 | -6 | +5 |
| | 139th | -2 | -2 | -3 | -9 | -2 |
| J | Current | -1 | -4 | -4 | -10 | -2 |
| | 140th | — | — | — | — | — |
| | 139th | -2 | -3 | -4 | -14 | -5 |
| K | Current | — | — | — | — | — |
| | 140th | — | — | — | — | — |
| | 139th | — | — | — | — | — |
| L | Current | -1 | -5 | +0.9 | +3 | +8 |
| | 140th | -3 | -5 | 0 | -6 | +2 |
| | 139th | -1 | -2 | +0.9 | +7 | +3 |
| M | Current | -2 | -2 | 0 | -4 | +0.5 |
| | 140th | -2 | -4 | +2 | -3 | +2 |
| | 139th | -2 | -2 | -2 | -6 | -2 |
| N | Current | -1 | +0.8 | +5 | -0.6 | +2 |
| | 140th | -0.9 | 0 | +4 | +2 | +2 |
| | 139th | -2 | +0.8 | +2 | -4 | +6 |
| O | Current | — | — | — | — | — |
| | 140th | — | — | — | — | — |
| | 139th | — | — | — | — | — |
| P | Current | -4 | -2 | 0 | -2 | +2 |
| | 140th | -0.2 | -3 | +3 | -5 | -3 |
| | 139th | +0.2 | -4 | +0.9 | -6 | +0.5 |
| Q | Current | -0.2 | -2 | -0.9 | -9 | -4 |
| | 140th | -0.7 | 02 | -0.9 | -11 | -7 |
| | 139th | -0.9 | -4 | +0.9 | -13 | -10 |
| S | Current | +2 | -4 | +4 | -0.3 | +3 |
| | 140th | +2 | -3 | +2 | +1 | +6 |
| | 139th | +2 | -2 | +6 | +2 | +6 |
| T | Current | -0.9 | -4 | +4 | +2 | -3 |
| | 140th | — | — | — | — | — |
| | 139th | — | — | — | — | — |

It may be noted in Table XXIV that for the current period the largest average difference (per cent) between the average basis weight results of the Institute and those of a given mill on corresponding samples was four per cent. By comparison, the largest average difference (per cent) noted for the previous two periods was three per cent. Further, it may be noted that the average basis weight result for Mill S was higher than that for the Institute, the average result for Mill H was the same, and the average results for the other mills were lower. The variations of 1 lb. or more for Mills E, I, and P may be excessive.

The maximum variation in caliper for the current period was seven per cent. This was larger than the maximum variation of five per cent for the previous two periods. Compared with the Institute's results, the average test result for Mill N was higher, and the average test results for the other mills were lower. The variations of 0.5 point or more for Mills B, E, G, J, L, S, and T may be excessive.

It may be noted in Table XXIV that the bursting strength results exhibited a maximum variation of five per cent for the current period. The average results for Mills E, F, H, L, N, S, and T were higher than those for the Institute, the average results for Mills B, I, M, and P were the same, and the average results for the other mills were lower. None of the variations appear to be exceptionally large. Agreement between Institute and mill results is very good.

It may be seen in Tables XXIII and XXIV that the average machine direction tear results for Mills A, F, L, and T were higher than those for the Institute, and the average results for the other mills were lower.

The maximum variation for the current period was twenty-three per cent. Agreement between the Institute and mill results was good in most cases. However, several mills---namely, B, E, and I--were associated with differences greater than ten per cent which may be excessive.

With regard to the cross-machine direction tear results, it may be noted that the average results for Mills A, D, F, L, M, N, P, and S were higher than those for the Institute, and the average results for the other mills were lower. The maximum variation for the current period was eight per cent. As in the case of the machine direction results, agreement between Institute and mill results was good.

The comparisons of Institute and mill data for individual sample lots are given in Tables XXV to XLIII for the various mills. In all the comparisons given in Tables XXV to XLIII, the Institute's test values have been used as the reference line.

COMPARISON OF INSTITUTE AND MILL DATA--FEBRUARY 1 THROUGH FEBRUARY 28, 1959

TABLE XXV

*MILL A -- 42-LB. LINERBOARD*

| File No. | Finish | Date Made | Mch. No. | Basis Weight, lb. | | | Caliper, points | | | Bursting Strength, p.s.i. gage | | | Elmendorf Tear, g./sheet In | | | Elmendorf Tear, g./sheet Across | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | IPC | Mill | Diff. | IPC | Mill | Diff. | IPC | Mill | Diff. | IPC | Mill | Diff. | IPC | Mill | Diff. |
| 181053 | W.F. | 1/21/59 | 2 | 44.2 | 44.0 | -0.2 | 13.1 | 12.7 | -0.4 | 115 | 109 | -6 | 318[a] | 342 | +24 | 364 | 390 | +26 |
| 181086 | W.F. | 1/28/59 | 2 | 43.8 | 43.8 | 0.0 | 12.9 | 12.0 | -0.9 | 109 | 111 | +2 | 356 | 360 | + 4 | 387[a] | 409 | +22 |
| 181087 | W.F. | 1/29/59 | 2 | 44.0 | 44.0 | 0.0 | 13.0 | 12.3 | -0.7 | 109 | 110 | +1 | 333[a] | 339 | + 6 | 365[a] | 386 | +21 |
| 181274 | W.F. | 2/ 1/59 | 2 | 43.9 | 43.3 | -0.6 | 12.1 | 12.0 | -0.1 | 118 | 112 | -6 | 323[a] | 334 | +11 | 377[a] | 387 | +10 |
| 181275 | W.F. | 2/ 2/59 | 2 | 43.5 | 43.2 | -0.3 | 12.3 | 12.3 | 0.0 | 115 | 113 | -2 | 329 | 329 | 0 | 377[a] | 383 | + 6 |
| 181276 | W.F. | 2/ 8/59 | 2 | 42.5 | 42.8 | +0.3 | 12.1 | 12.1 | 0.0 | 118 | 116 | -2 | 326 | 327 | + 1 | 377[a] | 379 | + 2 |
| 181277 | W.F. | 2/ 9/59 | 2 | 42.6 | 42.3 | -0.3 | 12.2 | 12.0 | -0.2 | 117 | 111 | -6 | 311[a] | 335 | +24 | 367[a] | 400 | +33 |
| Current Mill Average: | | | | 43.5 | 43.3 | -0.2 | 12.5 | 12.2 | -0.3 | 114 | 112 | -2 | 328 | 338 | +10 | 374 | 391 | +17 |

TABLE XXVI

MILL B -- 42-LB. LINERBOARD

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 181043 | W.F. | 1/19/59 | 1 | 42.8 | 42.7 | -0.1 | 12.9 | 12.4 | -0.5 | 106 | 105 | -1 | 295[a] | 273 | -22 | 349[a] | 348 | - 1 |
| 181044 | W.F. | 1/22/59 | 1 | 44.4 | 43.5 | -0.9 | 13.4 | 12.7 | -0.7 | 109 | 110 | +1 | 301[a] | 280 | -21 | 345[a] | 362 | +17 |
| 181045 | W.F. | 1/23/59 | 1 | 44.6 | 43.7 | -0.9 | 13.7 | 13.0 | -0.7 | 107 | 107 | 0 | 328[a] | 264 | -64 | 367[a] | 349 | -18 |
| 181046 | W.F. | 1/23/59 | 1 | 45.2 | 44.9 | -0.3 | 13.8 | 13.2 | -0.6 | 112 | 112 | 0 | 316[a] | 261 | -55 | 379[a] | 358 | -21 |
| 181047 | W.F. | 1/23/59 | 1 | 44.2 | 43.5 | -0.7 | 13.3 | 12.6 | -0.7 | 105 | 106 | +1 | 304[a] | 264 | -40 | 357[a] | 349 | - 8 |
| Current Mill Average: | | | | 44.2 | 43.7 | -0.5 | 13.4 | 12.8 | -0.6 | 108 | 108 | 0 | 309 | 268 | -41 | 359 | 353 | - 6 |

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.

COMPARISON OF INSTITUTE AND MILL DATA--FEBRUARY 1 THROUGH FEBRUARY 28, 1959 (continued)

TABLE XXVII

MILL C -- 42-LB. LINERBOARD

| File No. | Finish | Date Made | Mch. No. | Basis Weight, lb. | | | Caliper, points | | | Bursting Strength, p.s.i. gage | | | Elmendorf Tear, g./sheet | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | In | | | Across | | |
| | | | | IPC | Mill | Diff. | IPC | Mill | Diff. | IPC | Mill | Diff. | IPC | Mill | Diff. | IPC | Mill | Diff. |
| No samples submitted | | | | | | | | | | | | | | | | | | |

TABLE XXVIII

MILL D -- 42-LB. LINERBOARD

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 181002 | WF1S | 1/22/59 | 2 | 44.4 | 43.7 | -0.7 | 14.6 | 14.1 | -0.5 | 107 | 106 | -1 | 361[a] | 311 | -50 | 393[a] | 378 | -15 |
| 181056 | WF1S | 1/29/59 | 2 | 44.1 | 43.2 | -0.9 | 14.3 | 13.8 | -0.5 | 107 | 107 | 0 | 347[a] | 327 | -20 | 376[a] | 459 | +83 |
| 181272 | WF1S | 2/10/59 | 2 | 42.8 | 42.4 | -0.4 | 14.2 | 13.8 | -0.4 | 104 | 104 | 0 | 338[a] | 324 | -14 | 356[a] | 383 | +27 |
| 181279 | WF1S | 2/12/59 | 2 | 43.2 | 43.3 | +0.1 | 14.2 | 13.8 | -0.4 | 107 | 105 | -2 | 342 | 305 | -37 | 391[a] | 361 | -30 |
| Current Mill Average: | | | | 43.6 | 43.1 | -0.5 | 14.3 | 13.9 | -0.4 | 106 | 105 | -1 | 347 | 317 | -30 | 379 | 395 | +16 |

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.

COMPARISON OF INSTITUTE AND MILL DATA--FEBRUARY 1 THROUGH FEBRUARY 28, 1959 (continued)

TABLE XXIX

MILL E -- 42-LB. LINERBOARD

| File No. | Finish | Date Made | Mch. No. | Basis Weight, lb. | | | Caliper, points | | | Bursting Strength, p.s.i. gage | | | Elmendorf Tear, g./sheet | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | In | | | Across | | |
| | | | | IPC | Mill | Diff. | IPC | Mill | Diff. | IPC | Mill | Diff. | IPC | Mill | Diff. | IPC | Mill | Diff. |
| 181050 | W.B. | 1/23/59 | - | 43.6 | 42.4 | -1.2 | 11.9 | 11.3 | -0.6 | 114 | 122 | + 8 | 357[a] | 293 | -64 | 392[a] | 380 | -12 |
| 181051 | W.B. | 1/27/59 | - | 43.4 | 42.9 | -0.5 | 11.7 | 11.2 | -0.5 | 111 | 116 | + 5 | 353 | 324 | -29 | 418[a] | 397 | -21 |
| 181203 | W.B. | 2/ 1/59 | - | 43.5 | 42.6 | -0.9 | 11.5 | 11.2 | -0.3 | 106 | 108 | + 2 | 354[a] | 333 | -21 | 392[a] | 380 | -12 |
| 181204 | W.B. | 2/ 3/59 | - | 43.6 | 42.6 | -1.0 | 11.8 | 11.3 | -0.5 | 113 | 113 | 0 | 347[a] | 296 | -51 | 403[a] | 396 | - 7 |
| 181205 | W.B. | 2/ 3/59 | - | 43.7 | 42.7 | -1.0 | 11.6 | 11.0 | -0.6 | 107 | 121 | +14 | 363 | 309 | -54 | 417[a] | 401 | -16 |
| 181206 | W.B. | 2/ 8/59 | - | 43.0 | 41.8 | -1.2 | 12.1 | 11.6 | -0.5 | 112 | 108 | - 4 | 307 | 283 | -24 | 375[a] | 353 | -22 |
| 181265 | W.B. | 2/ 9/59 | - | 44.4 | 43.5 | -0.9 | 12.6 | 12.1 | -0.5 | 110 | 114 | + 4 | 353 | 320 | -33 | 397[a] | 403 | + 6 |
| Current Mill Average: | | | | 43.6 | 42.6 | -1.0 | 11.9 | 11.4 | -0.5 | 110 | 115 | + 5 | 348 | 308 | -40 | 399 | 387 | -12 |

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.

COMPARISON OF INSTITUTE AND MILL DATA--FEBRUARY 1 THROUGH FEBRUARY 28, 1959 (continued)

TABLE XXX

MILL F -- 42-LB. LINERBOARD

| File No. | Finish | Date Made | Mch. No. | Basis Weight, lb. | | | Caliper, points | | | Bursting Strength, p.s.i. gage | | | Elmendorf Tear, g./sheet: In | | | Elmendorf Tear, g./sheet: Across | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | IPC | Mill | Diff. | IPC | Mill | Diff. | IPC | Mill | Diff. | IPC | Mill | Diff. | IPC | Mill | Diff. |
| 181193 | W.F. | 2/ 4/59 | - | 42.8 | 42.3 | -0.5 | 12.5 | 12.2 | -0.3 | 113 | 115 | +2 | 355 | 367 | +12 | 390[a] | 392 | + 2 |
| 181194 | W.F. | 2/ 9/59 | - | 44.2 | 44.0 | -0.2 | 12.6 | 12.2 | -0.4 | 107 | 115 | +8 | 371[a] | 389 | +18 | 397[a] | 413 | +16 |
| 181195 | W.F. | 2/ 9/59 | - | 43.9 | 43.6 | -0.3 | 12.4 | 12.3 | -0.1 | 112 | 114 | +2 | 366[a] | 397 | +31 | 412[a] | 428 | +16 |
| 181196 | W.F. | 2/10/59 | - | 42.0 | 41.7 | -0.3 | 12.4 | 12.4 | 0.0 | 108 | 101 | -7 | 362[a] | 389 | +27 | 373[a] | 404 | +31 |
| 181227 | W.F. | 2/10/59 | - | 42.6 | 42.6 | 0.0 | 12.1 | 12.1 | 0.0 | 110 | 112 | +2 | 363[a] | 372 | + 9 | 396[a] | 391 | - 5 |
| 181228 | W.F. | 2/10/59 | - | 43.7 | 43.7 | 0.0 | 12.3 | 12.3 | 0.0 | 118 | 117 | -1 | 348[a] | 381 | +33 | 398[a] | 436 | +38 |
| 181229 | W.F. | 2/11/59 | - | 43.6 | 43.3 | -0.3 | 12.0 | 11.8 | -0.2 | 112 | 108 | -4 | 375[a] | 388 | +13 | 393[a] | 420 | +27 |
| 181230 | W.F. | 2/12/59 | - | 44.8 | 44.4 | -0.4 | 12.4 | 12.3 | -0.1 | 106 | 110 | +4 | 377[a] | 397 | +20 | 432[a] | 427 | - 5 |
| Current Mill Average: | | | | 43.5 | 43.2 | -0.3 | 12.3 | 12.2 | -0.1 | 111 | 112 | +1 | 364 | 385 | +21 | 399 | 414 | +15 |

TABLE XXXI

MILL G -- 42-LB. LINERBOARD

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 181038 | ---- | 1/30/59 | 2 | 43.0 | 41.9 | -1.1 | 12.9 | 11.7 | -1.2 | 114 | 107 | -7 | 359[a] | | | 423[a] | | |
| 181085 | ---- | 2/ 5/59 | 2 | 43.1 | 42.1 | -1.0 | 12.8 | 11.9 | -0.9 | 107 | 106 | -1 | 334[a] | | | 394[a] | | |
| 181224 | ---- | 2/10/59 | 2 | 42.3 | 41.7 | -0.6 | 12.9 | 12.5 | -0.4 | 109 | 108 | -1 | 351[a] | | | 395[a] | | |
| Current Mill Average: | | | | 42.8 | 41.9 | -0.9 | 12.9 | 12.0 | -0.9 | 110 | 107 | -3 | 348 | | | 404 | | |

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.

COMPARISON OF INSTITUTE AND MILL DATA--FEBRUARY 1 THROUGH FEBRUARY 28, 1959 (continued)

TABLE XXXII

MILL H -- 42-LB. LINERBOARD

| File No. | Finish | Date Made | Mch. No. | Basis Weight, lb. | | | Caliper, points | | | Bursting Strength, p.s.i. gage | | | Elmendorf Tear, g./sheet In | | | Elmendorf Tear, g./sheet Across | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | IPC | Mill | Diff. | IPC | Mill | Diff. | IPC | Mill | Diff. | IPC | Mill | Diff. | IPC | Mill | Diff. |
| 180962 | W.F. | 1/21/59 | - | 43.2 | 43.7 | +0.5 | 13.1 | 12.8 | -0.3 | 103 | 113 | +10 | 332[a] | 333 | + 1 | 379[a] | 358 | -21 |
| 180963 | W.F. | 1/22/59 | - | 43.7 | 42.5 | -1.2 | 12.2 | 12.0 | -0.2 | 109 | 108 | - 1 | 332[a] | 303 | -29 | 373[a] | 356 | -17 |
| 180964 | W.F. | 1/23/59 | - | 42.9 | 42.7 | -0.2 | 12.3 | 12.0 | -0.3 | 116 | 115 | - 1 | 333[a] | 317 | -16 | 373[a] | 356 | -17 |
| 181040 | W.F. | 2/ 4/59 | - | 42.0 | 42.0 | 0.0 | 12.5 | 12.1 | -0.4 | 113 | 111 | - 2 | 295[a] | 311 | +16 | 349[a] | 352 | + 3 |
| 181041 | W.F. | 2/ 5/59 | - | 44.9 | 43.6 | -1.3 | 12.7 | 12.3 | -0.4 | 118 | 116 | - 2 | 332[a] | 335 | + 3 | 375[a] | 360 | -15 |
| 181042 | W.F. | 2/ 6/59 | - | 44.2 | 44.1 | -0.1 | 12.6 | 12.2 | -0.4 | 113 | 115 | + 2 | 373[a] | 344 | -29 | 383[a] | 369 | -14 |
| 181266 | W.F. | 2/11/59 | - | 42.2 | 43.3 | +1.1 | 12.8 | 12.9 | +0.1 | 108 | 108 | 0 | 310 | 308 | - 2 | 343[a] | 352 | + 9 |
| 181267 | W.F. | 2/12/59 | - | 42.6 | 44.1 | +1.5 | 12.6 | 12.4 | -0.2 | 108 | 116 | + 8 | 307[a] | 296 | -11 | 345[a] | 335 | -10 |
| 181268 | W.F. | 2/13/59 | - | 43.8 | 43.7 | -0.1 | 13.5 | 13.0 | -0.5 | 102 | 104 | + 2 | 327[a] | 287 | -40 | 364[a] | 341 | -23 |
| Current Mill Average: | | | | 43.3 | 43.3 | 0.0 | 12.7 | 12.4 | -0.3 | 110 | 112 | + 2 | 327 | 315 | -12 | 365 | 353 | -12 |

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.

COMPARISON OF INSTITUTE AND MILL DATA--FEBRUARY 1 THROUGH FEBRUARY 28, 1959 (continued)

TABLE XXXIII

MILL I -- 42-LB. LINERBOARD

| File No. | Finish | Date Made | Mch. No. | Basis Weight, lb. | | | Caliper, points | | | Bursting Strength, p.s.i. gage | | | Elmendorf Tear, g./sheet | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | In | | | Across | | |
| | | | | IPC | Mill | Diff. | IPC | Mill | Diff. | IPC | Mill | Diff. | IPC | Mill | Diff. | IPC | Mill | Diff. |
| 180968 | W.F. | 1/12/59 | 1 | 43.6 | 42.3 | -1.3 | 13.3 | 13.1 | -0.2 | 106 | 110 | +4 | 303[a] | 264 | - 39 | 343[a] | 366 | +23 |
| 180969 | W.F. | 1/15/59 | 1 | 42.8 | 42.3 | -0.5 | 14.1 | 13.5 | -0.6 | 101 | 109 | +8 | 297[a] | 284 | - 13 | 355[a] | 370 | +15 |
| 180970 | W.F. | 1/18/59 | 1 | 42.6 | 41.6 | -1.0 | 13.1 | 12.4 | -0.7 | 117 | 111 | -6 | 301[a] | 178 | -123 | 343[a] | 285 | -58 |
| 180971 | W.F. | 1/23/59 | 1 | 43.4 | 41.9 | -1.5 | 12.7 | 12.9 | +0.2 | 118 | 111 | -7 | 296[a] | 192 | -104 | 359[a] | 276 | -83 |
| Current Mill Average: | | | | 43.1 | 42.0 | -1.1 | 13.3 | 13.0 | -0.3 | 110 | 110 | 0 | 299 | 229 | - 70 | 350 | 324 | -26 |

TABLE XXXIV

MILL J -- 42-LB. LINERBOARD

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 180977 | WF1S | 1/19/59 | 1 | 43.6 | 42.7 | -0.9 | 12.7 | 12.2 | -0.5 | 109 | 105 | -4 | 313[a] | 289 | - 24 | 377[a] | 367 | -10 |
| 180978 | WF1S | 1/19/59 | 1 | 42.8 | 42.5 | -0.3 | 12.3 | 11.8 | -0.5 | 109 | 106 | -3 | 325[a] | 282 | - 43 | 369[a] | 368 | - 1 |
| Current Mill Average: | | | | 43.2 | 42.6 | -0.6 | 12.5 | 12.0 | -0.5 | 109 | 105 | -4 | 319 | 286 | - 33 | 373 | 367 | - 6 |

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.

COMPARISON OF INSTITUTE AND MILL DATA--FEBRUARY 1 THROUGH FEBRUARY 28, 1959 (continued)

TABLE XXXV

MILL K -- 42-LB. LINERBOARD

| File No. | Finish | Date Made | Mch. No. | Basis Weight, lb. | | | Caliper, points | | | Bursting Strength, p.s.i. gage | | | Elmendorf Tear, g./sheet | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | In | | | Across | | |
| | | | | IPC | Mill | Diff. | IPC | Mill | Diff. | IPC | Mill | Diff. | IPC | Mill | Diff. | IPC | Mill | Diff. |
| No samples submitted | | | | | | | | | | | | | | | | | | |

TABLE XXXVI

MILL L -- 42-LB. LINERBOARD

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 181084 | WF1S | 2/ 2/59 | 1 | 42.2 | 41.3 | -0.9 | 12.9 | 12.2 | -0.7 | 108 | 109 | +1 | 309 | 304 | - 5 | 367[a] | 381 | +14 |
| 181039 | WF1S | 2/ 2/59 | 1 | 42.2 | 42.1 | -0.1 | 12.9 | 12.2 | -0.7 | 106 | 108 | +2 | 311[a] | 336 | +25 | 361[a] | 404 | +43 |
| Current Mill Average: | | | | 42.2 | 41.7 | -0.5 | 12.9 | 12.2 | -0.7 | 107 | 108 | +1 | 310 | 320 | +10 | 364 | 393 | +29 |

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.

COMPARISON OF INSTITUTE AND MILL DATA--FEBRUARY 1 THROUGH FEBRUARY 28, 1959 (continued)

TABLE XXXVII

MILL M -- 42-LB. LINERBOARD

| File No. | Finish | Date Made | Mch. No. | Basis Weight, lb. | | | Caliper, points | | | Bursting Strength, p.s.i. gage | | | Elmendorf Tear, g./sheet | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | In | | | Across | | |
| | | | | IPC | Mill | Diff. | IPC | Mill | Diff. | IPC | Mill | Diff. | IPC | Mill | Diff. | IPC | Mill | Diff. |
| 180965 | W.F. | 1/19/59 | 2 | 44.1 | 43.3 | -0.8 | 12.4 | 12.1 | -0.3 | 113 | 116 | +3 | 353[a] | 329 | -24 | 411[a] | 398 | -13 |
| 180966 | W.F. | 1/19/59 | 2 | 43.5 | 43.2 | -0.3 | 12.1 | 12.0 | -0.1 | 112 | 115 | +3 | 359[a] | 326 | -33 | 388[a] | 392 | + 4 |
| 180967 | W.F. | 1/24/59 | 2 | 43.5 | 42.9 | -0.6 | 12.2 | 12.0 | -0.2 | 120 | 117 | -3 | 357[a] | 324 | -33 | 388[a] | 395 | + 7 |
| 181048 | W.F. | 2/ 2/59 | 1 | 44.5 | 43.3 | -1.2 | 12.8 | 12.1 | -0.7 | 116 | 114 | -2 | 349[a] | 336 | -13 | 400[a] | 388 | -12 |
| 181049 | W.F. | 2/ 3/59 | 2 | 44.0 | 43.0 | -1.0 | 12.3 | 12.0 | -0.3 | 116 | 111 | -5 | 309[a] | 328 | +19 | 363[a] | 386 | +23 |
| 181225 | W.F. | 2/ 9/59 | 2 | 44.0 | 43.7 | -0.3 | 13.0 | 12.8 | -0.2 | 113 | 113 | 0 | 355[a] | 363 | + 8 | 398[a] | 425 | +27 |
| 181226 | W.F. | 2/11/59 | 2 | 43.5 | 42.9 | -0.6 | 12.2 | 11.8 | -0.4 | 118 | 120 | +2 | 338[a] | 328 | -10 | 400[a] | 384 | -16 |
| Current Mill Average: | | | | 43.9 | 43.2 | -0.7 | 12.4 | 12.1 | -0.3 | 115 | 115 | 0 | 346 | 333 | -13 | 393 | 395 | + 2 |

TABLE XXXVIII

MILL N -- 42-LB. LINERBOARD

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 180974 | W.F. | 1/ 9/59 | 1 | 42.4 | 42.1 | -0.3 | 13.1 | 13.4 | +0.3 | 106 | 109 | + 3 | 337 | 307 | -30 | 363[a] | 366 | + 3 |
| 181052 | W.F. | 1/13/59 | 1 | 44.0 | 43.0 | -1.0 | 13.2 | 13.1 | -0.1 | 117 | 128 | +11 | 296 | 306 | +10 | 363[a] | 367 | + 4 |
| 181112 | W.F. | 1/20/59 | 1 | 42.2 | 42.0 | -0.2 | 13.4 | 13.4 | 0.0 | 106 | 110 | + 4 | 295[a] | 311 | +16 | 356[a] | 368 | +12 |
| Current Mill Average: | | | | 42.9 | 42.4 | -0.5 | 13.2 | 13.3 | +0.1 | 110 | 116 | + 6 | 310 | 308 | - 2 | 361 | 367 | + 6 |

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.

COMPARISON OF INSTITUTE AND MILL DATA--FEBRUARY 1 THROUGH FEBRUARY 28, 1959 (continued)

TABLE XXXIX

MILL O -- 42-LB. LINERBOARD

| File No. | Finish | Date Made | Mch. No. | Basis Weight, lb. | | | Caliper, points | | | Bursting Strength, p.s.i. gage | | | Elmendorf Tear, g./sheet | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | In | | | Across | | |
| | | | | IPC | Mill | Diff. | IPC | Mill | Diff. | IPC | Mill | Diff. | IPC | Mill | Diff. | IPC | Mill | Diff. |
| No samples submitted | | | | | | | | | | | | | | | | | | |

TABLE XL

MILL P -- 42-LB. LINERBOARD

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 180979 | W.F. | 1/31/59 | - | 44.4 | 42.6 | -1.8 | 12.1 | 11.8 | -0.3 | 111 | 114 | + 3 | 358[a] | 365 | + 7 | 366[a] | 384 | +18 |
| 180980 | W.F. | 1/19/59 | - | 44.0 | 42.3 | -1.7 | 12.9 | 12.5 | -0.4 | 115 | 117 | + 2 | 332[a] | 335 | + 3 | 374[a] | 381 | + 7 |
| 181201 | W.F. | 1/19/59 | - | 44.4 | 42.5 | -1.9 | 12.5 | 12.4 | -0.1 | 116 | 115 | - 1 | 340 | 326 | -14 | 369[a] | 358 | -11 |
| 181202 | W.F. | 1/19/59 | - | 44.1 | 42.8 | -1.3 | 12.1 | 11.9 | -0.2 | 121 | 118 | - 3 | 347 | 319 | -28 | 367[a] | 379 | +12 |
| Current Mill Average: | | | | 44.2 | 42.6 | -1.6 | 12.4 | 12.2 | -0.2 | 116 | 116 | 0 | 344 | 336 | - 8 | 369 | 376 | + 7 |

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.

COMPARISON OF INSTITUTE AND MILL DATA--FEBRUARY 1 THROUGH FEBRUARY 28, 1959 (continued)

TABLE XLI

MILL Q -- 42-LB. LINERBOARD

| File No. | Finish | Date Made | Mch. No. | Basis Weight, lb. | | | Caliper, points | | | Bursting Strength, p.s.i. gage | | | Elmendorf Tear, g./sheet | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | In | | | Across | | |
| | | | | IPC | Mill | Diff. | IPC | Mill | Diff. | IPC | Mill | Diff. | IPC | Mill | Diff. | IPC | Mill | Diff. |
| 180975 | W.F. | 1/27/59 | 1 | 42.8 | 42.6 | -0.2 | 12.1 | 12.0 | -0.1 | 112 | 110 | -2 | 309[a] | 277 | -32 | 343[a] | 326 | -17 |
| 180976 | W.F. | 1/27/59 | 1 | 43.0 | 42.6 | -0.4 | 12.3 | 12.0 | -0.3 | 112 | 110 | -2 | 331[a] | 265 | -66 | 350[a] | 328 | -22 |
| 181057 | W.F. | 1/31/59 | 2 | 42.8 | 42.5 | -0.3 | 12.4 | 11.9 | -0.5 | 110 | 114 | +4 | 314[a] | 269 | -45 | 347[a] | 327 | -20 |
| 181111 | W.F. | 1/31/59 | 2 | 43.2 | 43.1 | -0.1 | 12.1 | 11.5 | -0.6 | 114 | 116 | +2 | 301 | 283 | -18 | 366[a] | 350 | -16 |
| 181207 | W.F. | 2/ 7/59 | 2 | 42.4 | 42.4 | 0.0 | 12.0 | 11.8 | -0.2 | 112 | 108 | -4 | 311[a] | 306 | - 5 | 360[a] | 361 | + 1 |
| 181208 | W.F. | 2/ 6/59 | 2 | 42.4 | 42.6 | +0.2 | 12.0 | 11.8 | -0.2 | 109 | 110 | +1 | 309 | 294 | -15 | 371[a] | 360 | -11 |
| 181209 | W.F. | 2/ 6/59 | 2 | 42.2 | 42.5 | +0.3 | 12.0 | 11.8 | -0.2 | 114 | 109 | -5 | 331[a] | 307 | -24 | 363[a] | 357 | - 6 |
| Current Mill Average: | | | | 42.7 | 42.6 | -0.1 | 12.1 | 11.8 | -0.3 | 112 | 111 | -1 | 315 | 286 | -29 | 357 | 344 | -13 |

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.

COMPARISON OF INSTITUTE AND MILL DATA--FEBRUARY 1 THROUGH FEBRUARY 28, 1959 (continued)

TABLE XLII

MILL S -- 42-LB. LINERBOARD

| File No. | Finish | Date Made | Mch. No. | Basis Weight, lb. | | | Caliper, points | | | Bursting Strength, p.s.i. gage | | | Elmendorf Tear, g./sheet In | | | Elmendorf Tear, g./sheet Across | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | IPC | Mill | Diff. | IPC | Mill | Diff. | IPC | Mill | Diff. | IPC | Mill | Diff. | IPC | Mill | Diff. |
| 180972 | WF1S | 1/16/59 | 2 | 43.0 | 43.5 | +0.5 | 13.6 | 13.0 | -0.6 | 108 | 112 | +4 | 297[a] | 284 | -13 | 346[a] | 347 | + 1 |
| 180973 | WF1S | 1/19/59 | 2 | 42.0 | 43.3 | +1.3 | 12.6 | 12.2 | -0.4 | 110 | 114 | +4 | 320 | 330 | +10 | 353[a] | 376 | +23 |
| Current Mill Average: | | | | 42.5 | 43.4 | +0.9 | 13.1 | 12.6 | -0.5 | 109 | 113 | +4 | 308 | 307 | - 1 | 349 | 361 | +12 |

TABLE XLIII

MILL T -- 42-LB. LINERBOARD

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 181054 | W. | 1/27/59 | 4 | 42.8 | 42.2 | -0.6 | 12.1 | 11.8 | -0.3 | 103 | 108 | +5 | 375[a] | 364 | -11 | 369[a] | 367 | - 2 |
| 181055 | W. | 2/ 4/59 | 2 | 42.0 | 41.6 | -0.4 | 13.3 | 12.7 | -0.6 | 107 | 108 | +1 | 320[a] | 350 | +30 | 370[a] | 362 | - 8 |
| 181222 | W. | 2/ 6/59 | 4 | 42.8 | 42.1 | -0.7 | 12.5 | 11.8 | -0.7 | 108 | 110 | +2 | 375[a] | 365 | -10 | 342[a] | 333 | - 9 |
| 181223 | W. | 2/12/59 | 4 | 43.9 | 43.9 | 0.0 | 12.7 | 12.1 | -0.6 | 107 | 113 | +6 | 378 | 394 | +16 | 406[a] | 374 | -32 |
| Current Mill Average: | | | | 42.9 | 42.5 | -0.4 | 12.6 | 12.1 | -0.5 | 106 | 110 | +4 | 362 | 368 | + 6 | 372 | 359 | -13 |

[a] This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.

THE INSTITUTE OF PAPER CHEMISTRY

W. N. Hubert

W. N. Hubert, Research Aide
Container Section

R C McKee

R. C. McKee, Chief
Container Section